A Population-Based Study of Functional Disability, COVID-19 Symptoms, and Long COVID among U.S. Adults

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BACKGROUND

The COVID-19 pandemic has affected people at various levels in the U.S. and worldwide. COVID-19 can have long-term effects on health and well-being that may affect individuals at different levels. People with disabilities may bear a heavier burden of COVID-19 and be more susceptible to severe and prolonged symptoms.

OBJECTIVE

This study sought to assess the relationships between functional disability, COVID-19 symptoms, and long COVID among adults in the U.S.

MATERIALS & METHODS

This was a secondary analysis. We obtained population-based data from the 2022 National Health Interview Survey (NHIS) that utilized multistage probability sampling to interview adults aged ≥18 years in the U.S.

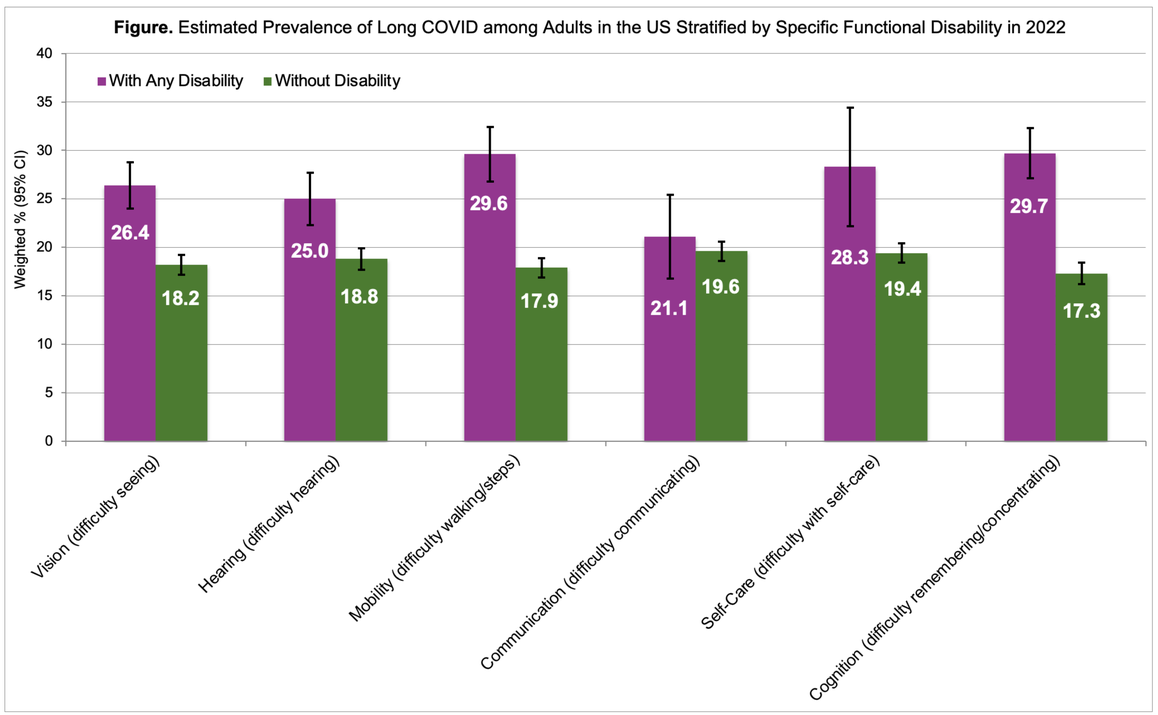
Any disability (yes/no) was defined by the Washington Group Composite Disability Indicator measuring self-reported levels of difficulty in 6 functional domains: vision, hearing, mobility, communication, cognition, and self-care.

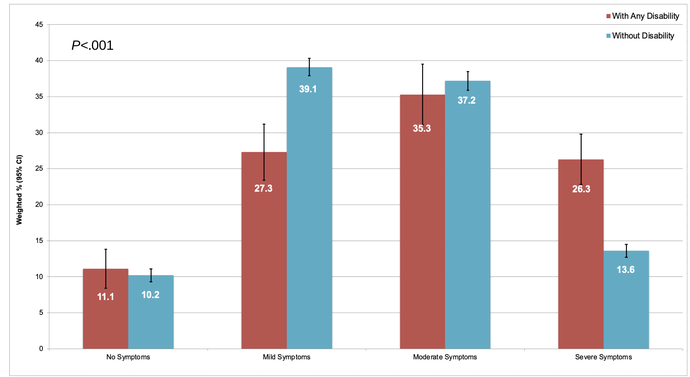
Long COVID was defined as having symptoms lasting ≥3 months that individuals did not have prior to COVID-19. We also assessed symptom severity (no, mild, moderate, severe) and receipt of ≥1 COVID-19 vaccine dose.

Weighted proportions (95% CI) were compared using the Rao-Scott Chi-squared test.
We performed weighted multivariable logistic regression, controlling for demographic characteristics, socioeconomic indicators and vaccination status.

Adjusted odds ratios (aOR) and 95% CIs were calculated. All analyses accounted for complex survey design and weights.

In the U.S., long COVID was more prevalent among adults with a functional disability.
Functional disability was associated with increased odds of long COVID.
Severe COVID-19 symptoms were more prevalent in adults with a functional disability than those without.





RESULTS & CONCLUSIONS

In this unweighted sample of 8946 adults (weighted n=89437918), the mean age was 44 years; 63.4% were White, followed by 19.2% Hispanic, 9.6% Black, and 7.8% Asian or Other. Overall, 7.6% (95% CI, 7.0-8.3%) had a disability and 19.7% (95% CI, 18.7-20.7%) experienced long COVID.

The percentage of long COVID was higher among adults with a disability than those without (33.7% [95% CI, 29.7-37.8%] vs 18.5% [95% CI, 17.5-19.6%]; *P*<.001). When adjusting for sociodemographic factors and vaccination status, adults with a disability had significantly greater odds of long COVID than those without (aOR, 2.01; 95% CI, 1.62-2.49; *P*<.001).

Furthermore, the proportion of having received ≥1 COVID vaccine dose was similar between adults with a disability (21.0%; 95% CI, 19.1-23.0%) and those without (20.4%; 95% CI, 19.5-21.2%) (*P*=.518).

Findings suggest that screening for symptoms and improving care access may help address long COVID disparities in adult populations with disabilities.

ACKNOWLEDGEMENT

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