

Study shows resilient biomedical scientists' careers took a hit during pandemic

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When COVID-19 presented the world with the greatest health challenge in modern history, it was biomedical scientists who stepped up to develop diagnostic testing and vaccines to slow the spread of the disease.

But how did these in-demand scientists fare psychologically and in their careers amid [pandemic](#) pressures such as juggling child and/or elder care with work? Until now, that hasn't been measured.

A new Northwestern Medicine study is the first to measure [resilience](#) in biomedical scientists during the pandemic. The findings highlight the consequences of the pandemic for women scientists of all career stages who experienced greater household responsibilities while facing [social pressure](#) to advance their careers. The study was published Aug. 9 in *JAMA Network Open*.

Of the 635 biomedical scientists surveyed between Oct. 1 and Nov. 30, 2020, 61% reported experiencing a career or professional setback during the pandemic. A high measure of resiliency was often associated with a professional setback, the study found. Seemingly, resiliency did not pay off for many.

"Our data show that you can be as resilient as you want, but there are certain structural factors, such as gender or [child care](#), that can hinder your professional advancement," said corresponding author Nicole Woitowich, executive director of the Northwestern University Clinical and Translational Sciences (NUCATS) Institute at Northwestern University Feinberg School of Medicine who was formally trained as a biomedical scientist.

Scientists were expected to persevere in achieving professional goals, expectations and milestones despite facing disparate professional and personal challenges, said Woitowich, who also is a research assistant professor of medical social sciences at Feinberg.

"We had originally hypothesized that resilient scientists would be less likely to experience setbacks during the pandemic—so these results surprised us," Woitowich said.

The scientists collected data from biomedical scientists who were members of the National Postdoctoral Association. Participants self-reported demographic information including gender, race and ethnicity. Some 58% of respondents reported being female, 40% reported being male and 1% preferred not to say.

Survey respondents answered yes, no or unsure to the question, "Have you experienced [career](#) or professional setbacks as a result of the COVID-19 pandemic?" They also completed the 10-item Connor-Davidson Resilience Scale, a test that measures resilience or how well one is equipped to bounce back after stressful events, tragedy or trauma.

'Resilience building is having a moment'

"Resilience building is having a moment in medicine right now, and while I think it supports beneficial coping skills, it might not sufficiently counteract sociocultural and contextual pressures arising from gender disparities within the biomedical workforce," Woitowich said.

The scientists hope one outcome of this research will be an increase of focused strategies to support the professional advancement of women and gender-minority scientists, particularly in the wake of the pandemic.

Other Northwestern co-authors include Christine V. Wood and Lutfiyya N. Muhammad.

More information: Evaluation of Professional Setbacks and Resilience in Biomedical Scientists During the COVID-19 Pandemic, *JAMA Network Open* (2023). [DOI: 10.1001/jamanetworkopen.2023.28027](https://doi.org/10.1001/jamanetworkopen.2023.28027)

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