

COVID-19 infections in friend, family groups may influence vaccine willingness

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As the United States battles COVID-19 vaccine hesitancy amid a surge in cases fueled by the delta variant, a new study co-authored by a New Mexico State University researcher examines how COVID-19 infections in social circles may influence vaccine willingness.

In the study, Jagdish Khubchandani, public health sciences professor at

NMSU, and a team of researchers conducted a national assessment of COVID-19 [vaccine](#) willingness among American adults based on COVID-19 infections, hospitalizations and deaths within their friend and [family groups](#).

"In this study, and in our prior studies, we have extensively studied COVID-19 [vaccine hesitancy](#), and some factors repeatedly emerge as predictors of vaccine [hesitancy](#)," said Khubchandani, who has conducted multiple studies on COVID-19 vaccine hesitancy since late 2020.

"Education, race and [political ideology](#) are the major factors, and we need more efforts to reach sections of our society that remain hesitant about the vaccines."

The study, published this week in the *International Journal of Environmental Research and Public Health*, included 1,602 participants, a majority of whom, about 79 percent, reported receiving at least one dose of a COVID-19 vaccine. The remaining participants indicated they planned to get the vaccine (10 percent) or would not (11 percent).

Researchers found the rates of vaccine hesitancy differed significantly based on whether or not participants in the study had a close friend or family member who was affected with COVID-19.

Compared to participants who knew family members or friends affected by COVID-19, those who did not know anyone with a COVID-19 [infection](#) (24 percent), hospitalization (24 percent), or death (19 percent) had a statistically significantly higher tendency to decline vaccines, according to the findings.

Overall, participants who did not have a friend or family member infected, hospitalized or die because of COVID-19 were at least two times more likely to refuse vaccines, compared to those who had someone in their social networks who was affected by COVID-19

infection.

Vaccine refusal in the study group was higher among non-Hispanic Blacks, political conservatives, independent-leaning voters, suburban dwellers, people with less than a college education and non-married individuals.

"Our previous studies have shown that individuals with greater perceived risk and fear of COVID-19 were more willing to take the vaccines," Khubchandani said. "It could be possible that knowing someone affected with COVID-19 could increase the perceived risk and fear of COVID-19 infection, which in turn could increase willingness for COVID-19 vaccination."

Researchers also conducted a multiple [regression analysis](#), adding all the variables in an equation to predict vaccine hesitancy, and found the only significant and final predictors of vaccine hesitancy were education, political affiliation and whether someone knew a family member or friend infected with COVID-19.

"Much of the campaigning around COVID-19 vaccination focuses on benefits of vaccines. In this study, we suggest awareness initiatives that focus on comparative analyses of the risks of having COVID-19 infection versus COVID-19 vaccination," Khubchandani said. "Such communication, along with addressing public concerns like safety and side effects of vaccines, could be useful among those who do not have favorable attitudes toward vaccinations."

Khubchandani added that clinicians in health care facilities and community advocates for vaccinations should raise awareness and educate individuals about the severity and extent of COVID-19 infection-related morbidity and mortality. For example, Khubchandani said, more than 40 million Americans have contracted COVID-19, and more than

650,000 have died from the disease. By contrast, more than half of American adults are now fully vaccinated for COVID-19, and breakthrough infections and deaths remain very low among vaccinated individuals.

"The benefits clearly outweigh the risks, and public officials should use a combination of strategies to raise vaccine awareness," he said.

More information: Jagdish Khubchandani et al, COVID-19 Morbidity and Mortality in Social Networks: Does It Influence Vaccine Hesitancy?, *International Journal of Environmental Research and Public Health* (2021). [DOI: 10.3390/ijerph18189448](https://doi.org/10.3390/ijerph18189448)

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