

COVID vaccines don't just benefit physical health, they also improve mental health

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Credit: AI-generated image ([disclaimer](#))

The considerable [physical health benefits](#) of COVID vaccines, in particular, the significantly reduced risk of serious illness, hospitalization and death from the virus, are well known.

But what about the benefits of vaccination for [mental health](#)? Does

vaccination help to lessen the psychological distress associated with COVID? And if so, how substantial are the positive effects?

We speculated that COVID vaccination would be beneficial for people's mental well-being as it may reduce the anxiety surrounding COVID (at least, regarding a person's own health).

In a new study, published in the *European Economic Review* using data from thousands of U.K. adults, we've shown that vaccination is linked to a significant easing in the psychological distress associated with COVID.

To understand the benefits of vaccination on mental health, we compared the mental well-being of people who had received the [vaccine](#) (one or two doses) with those who had not. We used data from the [U.K. Household Longitudinal Study](#), a large annual household survey that captures a wide range of information from adults living in the U.K. We looked specifically at data collected between January and March 2021.

The measure of mental well-being used in this study was the [General Health Questionnaire](#). It consists of a 12-item scale designed to assess stress, anxiety and happiness.

One issue with simply comparing the mental well-being of both groups (those who had been vaccinated, and those who had not) is that there may be important differences between them. This may mean that we could mistake differences between the mental well-being of the groups as being due to vaccination when they could be a result of other factors.

Our approach to this potential problem was to match both groups carefully, so that the people who were vaccinated were very similar to those who were not, for example, in characteristics like age.

We also had a variable in the survey capturing whether people were

willing to take a [vaccine](#), which meant that we could match both groups based on their willingness to be vaccinated. This could be important as people who refuse a vaccine, for example, due to a lower trust in the government, may have lower well-being in the first place.

Our results suggest that for the group of people who were vaccinated, vaccination led to a large reduction in their [psychological distress](#).

To understand how large this estimated effect was, we compared it with the estimated effect of other major life events on mental well-being (taken from other studies). The benefit for well-being in the vaccinated group was equivalent to about half to two-thirds of the mental well-being benefits associated with moving from [unemployment](#) to full employment.

Differences across age groups

We must note that while just under half of the respondents in our sample were vaccinated, owing to the phased rollout of COVID vaccines, this was also the half that was most likely to be at risk from a COVID infection.

That said, we had significant numbers of people across all age groups who were vaccinated.

We looked to see if there was any difference in the benefits of vaccination for mental well-being across different groups. Specifically, we compared the estimated mental well-being benefits of vaccination for people under the average (median) age (56) in our sample with those above this age. We also compared people who were classified as "clinically vulnerable" (people at greater risk of harm from an infection) with those who were not.

We found that the mental well-being benefits associated with vaccination were heavily concentrated on the older and clinically vulnerable groups. Our proposed explanation is that in the absence of vaccination, anxiety about contracting COVID would be particularly strong for this group.

On the other hand, when looking at younger groups who were not clinically vulnerable, we found little evidence to suggest that vaccination led to a substantial improvement in their mental well-being.

It's perhaps worth noting here that despite a successful COVID vaccination drive in the U.K. overall, younger groups are most likely to express vaccine hesitancy.

Our findings may help to explain this. For young people, not taking up the vaccine may be primarily due to a lack of perceived benefits for their own well-being (weighed up alongside any perceived costs), as opposed to vaccine hesitancy in all cases.

More information: Kausik Chaudhuri et al, The impact of COVID-19 vaccination for mental well-being, *European Economic Review* (2022).
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