Psychological Factors Help Predict the Negative Effects of the COVID Vaccination

Shweta Kamthan*

Department of Medical Sciences, Banasthali Vidyapith, India

Corresponding Author*

Shweta Kamthan
Department of Medical Sciences, Banasthali Vidyapith, India
E-mail: kamthanshweta56@gmail.com

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Introduction

Before having the COVID-19 vaccine, many of us were expecting the modest but unpleasant side effects we'd heard about in the news or from friends and neighbours who had already gotten the shot.

According to new research performed by The University of Toledo, how much attention people pay to their anxieties may predict how bad they'll feel after getting vaccinated [1].

Researchers highlighted for the first time a link between the adverse effects patients predicted from COVID-19 vaccination and the ones they actually experienced in a paper published online today in the journal Psychotherapy and Psychosomatics [2].

“Dr. Andrew Geers, professor in the UToledo Department of Psychology and the paper's lead author, said, "It's crucial to see how psychological characteristics may be correlated to how people respond to these vaccines." "Our findings demonstrate that persons who predicted adverse effects such as headaches, weariness, or soreness at the injection site were considerably more likely to experience them than those who did not."

Geers' group focuses on the application of social psychology theory to health and medical issues, such as pharmacological side effects, placebo effects, and nocebo effects.

While the impact of psychosocial factors on the success or side effects of a certain treatment has been thoroughly documented in the scientific literature, no one had done so in the context of COVID-19 vaccinations [3].

In April, Geers and his colleagues distributed a survey in the United States asking unvaccinated adults about their expectations for seven common vaccine side effects that the US Centers for Disease Control and Prevention had widely publicised - pain at the injection site, fever, chills, headache, joint pain, nausea, and fatigue. The survey also gathered socio-demographic data and rated participants' depression symptoms and overall pandemic anxiety.

Researchers followed up with 551 now fully vaccinated participants over the next three months to see which of the seven previously indicated negative effects they had experienced.

Kelly Clemens, a UToledo PhD student researching experimental psychology and paper co-author, said, "We found a definite correlation between what people predicted and what they experienced." "Those psychological aspects are predictive above and beyond the other factors we knew were involved in predicting side effects, such as the precise vaccine someone had, their age, or if they had previously had COVID-19," says the study's lead author [4].

The study, according to Geers and Clemens, could provide significant clues for overcoming some of the residual vaccine hesitation - both for first-timers who are concerned about side effects and those who are eligible for a booster dosage but don't want to go through the process again.

"Even in something that we know is really physical," Geers said, "this really highlights the power of expectations and beliefs." “It indicates that the vaccine's effect is modified by psychology, specifically expectations and anxiety. If we can reframe and think about side effects in a different way, we might be able to lessen the number of people who experience them [5].”

Geers and Clemens are collaborating with colleagues to examine similar data from other countries in order to better understand how vaccine side effects are reported. They also intend to look into additional data from their survey, such as other side effects, severity of adverse effects, booster dose intention, and social media use.

References

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