

The Effect of Newspaper Reporting on COVID-19 Vaccine Hesitancy: A Randomised Controlled Trial

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Abstract : COVID-19 vaccine hesitancy can be observed at different rates in different countries. In June 2021, 1,068 people were surveyed in France and Italy to inquire about individual potential acceptance, focusing on time preferences in a risk-return framework: having the vaccination today, in a month, and in 3 months; perceived risks of vaccination and COVID-19; and expected benefit of the vaccine. A randomized controlled trial was conducted to understand how everyday stimuli like fact-based news about vaccines impact an audience's acceptance of vaccination. The main experiment involved two groups of participants and two different articles about vaccine-related thrombosis taken from two Italian newspapers. One article used a more abstract description and language, and the other used a more anecdotal description and concrete language; each group read only one of these articles. Two other groups were assigned categorization tasks; one was asked to complete a concrete categorization task, and the other an abstract categorization task. Individual preferences for vaccination were found to be variable and unstable over time, and individual choices of accepting, refusing, or delaying could be affected by the way news is written. In order to understand these dynamic preferences, the present work proposes a new model based on seven categories of human behaviors that were validated by a neural network. A treatment effect was observed: participants who read the articles shifted to vaccine hesitancy categories more than participants assigned to other treatments and control. Furthermore, there was a significant gender effect, showing that the type of language leading to a lower hesitancy rate for men is correlated with a higher hesitancy rate for women and vice versa. This outcome should be taken into consideration for an appropriate gender-based communication campaign aimed at achieving herd immunity. The trial was registered at ClinicalTrials.gov NCT05582564 (17/10/2022).

Keywords : vaccine hesitancy, risk elicitation, neural network, covid19

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