

## Impacts of COVID-19 Risk Messaging on Mask Wearing Intentions

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### Abstract

**Background.** Since January 2020, there have been 8 million cases and 200,000 deaths from COVID-19 in the US. The Centers for Disease Control recommends universal mask wearing along with social distancing and other precautions to stop the spread of COVID-19. Despite this, not all Americans consistently wear masks. To stop the spread of COVID-19, there is a need for research on how to more effectively communicate risk to increase mask compliance.

**Objectives.** To evaluate how COVID-19 risk messaging can impact perceived risk from COVID-19 and intentions to wear a mask.

**Methods.** Data were collected from May to September 2020 from 426 participants who completed an online questionnaire. Respondents were randomly assigned to one of 6 messages that provided information on: 1. the individual's risk from COVID-19; 2. the individual's ability to infect others with COVID-19; 3. social distancing; 4. the individual's risk & social distancing; 5. social distancing & mask wearing; and 6. the individual's risk from COVID-19, social distancing & mask wearing ("kitchen sink"). The analyses included those randomly assigned to a messaging condition, who responded to questions about risk perception and mask wearing pre-messaging ( $n=301$ ).

**Results.** Across all messages, participants' perceptions of the severity of risk from COVID-19 increased after reading any message,  $t(301)=-2.84$ ,  $p=.005$ . After removing outliers, there were differences between the messages such that the message that provided information on social distancing & mask wearing (#5) increased perceptions of the severity of risk from COVID-19 the most,  $F(5,292)=2.079$ ,  $p=0.068$  (adjusted  $R^2=0.018$ ). After removing outliers and adjusting for prior week mask use, there were no differences between the arms in intentions to wear a mask,  $F(5,290)=1.856$ ,  $p=.102$ .

**Conclusion.** We found that during the height of the pandemic, risk communication messages can increase perceptions of severity of risk from COVID-19, with a message about behaviors to reduce risk having the greatest impact. There were no differences between messages in intentions to wear a mask. These results are consistent with previous research which has shown that messages that increase perceptions of risk do not always improve intentions to perform behaviors to reduce risk.