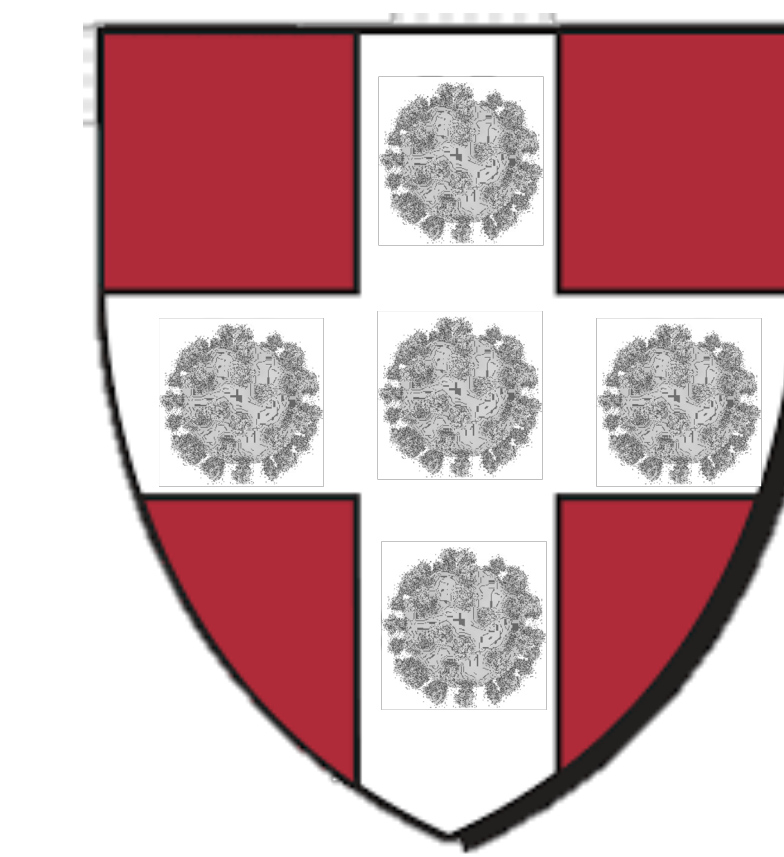# Effects of Politicization and Media Coverage of COVID-19 on Confusion about Health Policies and Scientific Findings

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Introduction

Health politicization is when political cues become integrated into the public presentation of a health issue. COVID-19 is a political-communication and health-communication crisis. The pandemic has been communicated in diverse ways - through conflicting science, downplayed threats, emotional arousal, and fragmented media. Republican politicians publicly downplayed the threat, while Democratic politicians responded with more concern, signaling different public cues. Due to the novelty of this virus, science is rapidly evolving which gives rise to the appearance of expert disagreement and conflicting information. This provokes strong emotions, particularly fear and anxiety, that makes people seek out information to resolve them leading to biased searching, thus exposure to partisan-oriented and/or misleading information. Prior work has suggested that when the public perceives conflict and controversy about health issues, confusion is generated and the following decrease in trust of health recommendations is seen. It is important for us to understand the effects of politicization and media coverage of COVID-19 on confusion about health policies and scientific findings, thus the corresponding support and trust in science, government, doctors, and journalists. We fielded two studies that give us insight into public's perception of the pandemic and its severity through media and credibility priming. We examined confusion as a function of question wording, partisan affiliation, ideology, demographics, and the priming of politicization.

Methods

Study 1 – June 3, 2020

You may have heard the term "social distancing" in the news or from other people recently.	
How would you describe what the term means? (N = 761)	Which of the following actions if any would you say are consistent with social distancing? (N = 772)

Table 1: The participants were randomly assigned to two different treatment groups (open ended question and question with multiple choices). Follow-up questions were asked about their confusion with regards to social distancing and its guidelines and about their perception of disagreement among health experts and politicians about prevention of spread, guidelines, and severity of the virus (which coincides with scientific uncertainty, politicization, and media representation). The sample is nationally representative as information was collected from Dynata.

Study 2 – July 2, 2020

On the next page, you will see a recent news article published in a local paper. Please take a moment to read it, and you will be asked a few questions about it afterward.	
COVID BASE TREATMENT GROUP	COVID POLITICIZATION TREATMENT GROUP
CDC Updates Recommendations on Mask Wearing (N = 303)	Controversy and Political Pushback Over CDC Mask Wearing Recommendations in Light of Doubts About Scientific Evidence (N = 302)

Table 2: The participants were randomly assigned to two different treatment groups (COVID base and COVID politicization). According to the assignment, the participants were required to read an article. The base group article was an informative article highlighting CDC and WHO updated guidelines on face coverings. The politicization group article used words and phrases like "heated debate", "controversial", "proponents of broader mask usage", "opponents of mask usage", "much is unclear about how much asymptomatic spread there actually is", "state senator cast doubt on scientific evidence", "partisan disagreement", and "Trump's public declaration that he won't wear a mask" to prime participants into thinking there is scientific uncertainty and disagreement amongst politicians which covers the three dimensions of politicization. The sample is nationally representative as information was collected from Dynata.

Study 1

```
.  tab q50_1  // social distancing

i am confused about social |
            distancing |      Freq.     Percent        Cum.

         strongly disagree |        674       45.98       45.98
                  disagree |        261       17.80       63.78
         somewhat disagree |         63        4.30       68.08
neither agree nor disagree |        122        8.32       76.40
          somewhat agree |         73        4.98       81.38
                     agree |         98        6.68       88.06
            strongly agree |        175       11.94      100.00

                     Total |      1,466      100.00

.  tab q50_2  // social distancing recommendations

i am confused about social |
 distancing recommendations |      Freq.     Percent        Cum.

         strongly disagree |        557       38.31       38.31
                  disagree |        252       17.33       55.64
         somewhat disagree |         76        5.23       60.87
neither agree nor disagree |        139        9.56       70.43
          somewhat agree |         94        6.46       76.89
                     agree |        117        8.05       84.94
            strongly agree |        219       15.06      100.00

                     Total |      1,454      100.00
```

Table 3: Summary of the confusion categorical variables about social distancing and social distancing recommendations. The correlation between them was more than 0.5 so an average was taken for further analysis.

```
.  reg q50_avg pidrep social_class white educ female

    Source |        SS          df       MS       Number of obs  =     1,446
                                                  F(5, 1440)     =     18.92
     Model |  387.066542         5  77.4133083    Prob > F       =    0.0000
  Residual |  5893.42181      1,440  4.09265348    R-squared      =    0.0616
                                                  Adj R-squared  =    0.0584
     Total |  6280.48755      1,445  4.34635817    Root MSE       =     2.023

    q50_avg |      Coef.   Std. Err.      t    P>|t|    [95% Conf. Interval]

      pidrep |   .0396911   .025512     1.56    0.120   -.0103536   .0897357
social_class |   .1806841   .0472078    3.83    0.000    .0880807   .2732874
       white |  -.922565   .1137082    -8.11    0.000   -1.145616   -.6995135
        educ |  -.2705758   .0684583    -3.95    0.000   -.4048645   -.1362871
      female |  -.2060768   .1104191    -1.87    0.062   -.4226762   .0105227
       _cons |   3.671238   .2853847    12.86    0.000    3.111424   4.231053
```

Table 4: Predicting confusion about social distancing with demographics of the sample of respondents. For every unit increase in Upper Class, a 0.18068 unit increase in social distancing confusion is predicted, holding all other variables constant. For every unit increase in white, a 0.92257 unit decrease in social distancing confusion is predicted, holding all other variables constant. For every unit increase in educ, a 0.27058 unit decrease in social distancing confusion is predicted, holding all other variables constant. These are statistically significant (P-value = 0.000).

Results and Summaries

Study 2

```
.  reg covidconfuseavg ib1.covidwoi

    Source |        SS          df       MS       Number of obs  =      812
                                                  F(2, 809)      =     7.77
     Model |  47.5144715         2  23.7572357    Prob > F       =   0.0005
  Residual |  2473.02832       809  3.05689533    R-squared      =   0.0189
                                                  Adj R-squared  =   0.0164
     Total |  2520.5428        811  3.10794426    Root MSE       =   1.7484

  covidconfu~g |     Coef.   Std. Err.      t    P>|t|    [95% Conf. Interval]

      covidwoi |
       control |   .6210838   .157659    3.94    0.000    .3116148    .9305529
      covidcup |   .2719221   .1421652   1.91    0.056   -.007134    .5509782
         _cons |   3.120462   .1004428   31.07   0.000    2.923303   3.317621
```

Table 5: Predicting confusion about effectiveness of mask wearing for preventing COVID-19 spread by setting covid base treatment group as the base level here. For every unit increase in control, there is a 0.62108 unit increase in confusion which is statistically significant as the P-value is 0.000. For every unit increase in exposure to politicization, there is a 0.2719 unit increase in confusion which is almost statistically significant as the P-value is 0.056.

Summary: Reading the coronavirus article on masks decreased confusion overall, but when respondents were exposed to politicization in the article, they were more confused than when the article did not have politicization.

Adjusted Predictions of covidwoi with 95% CIs
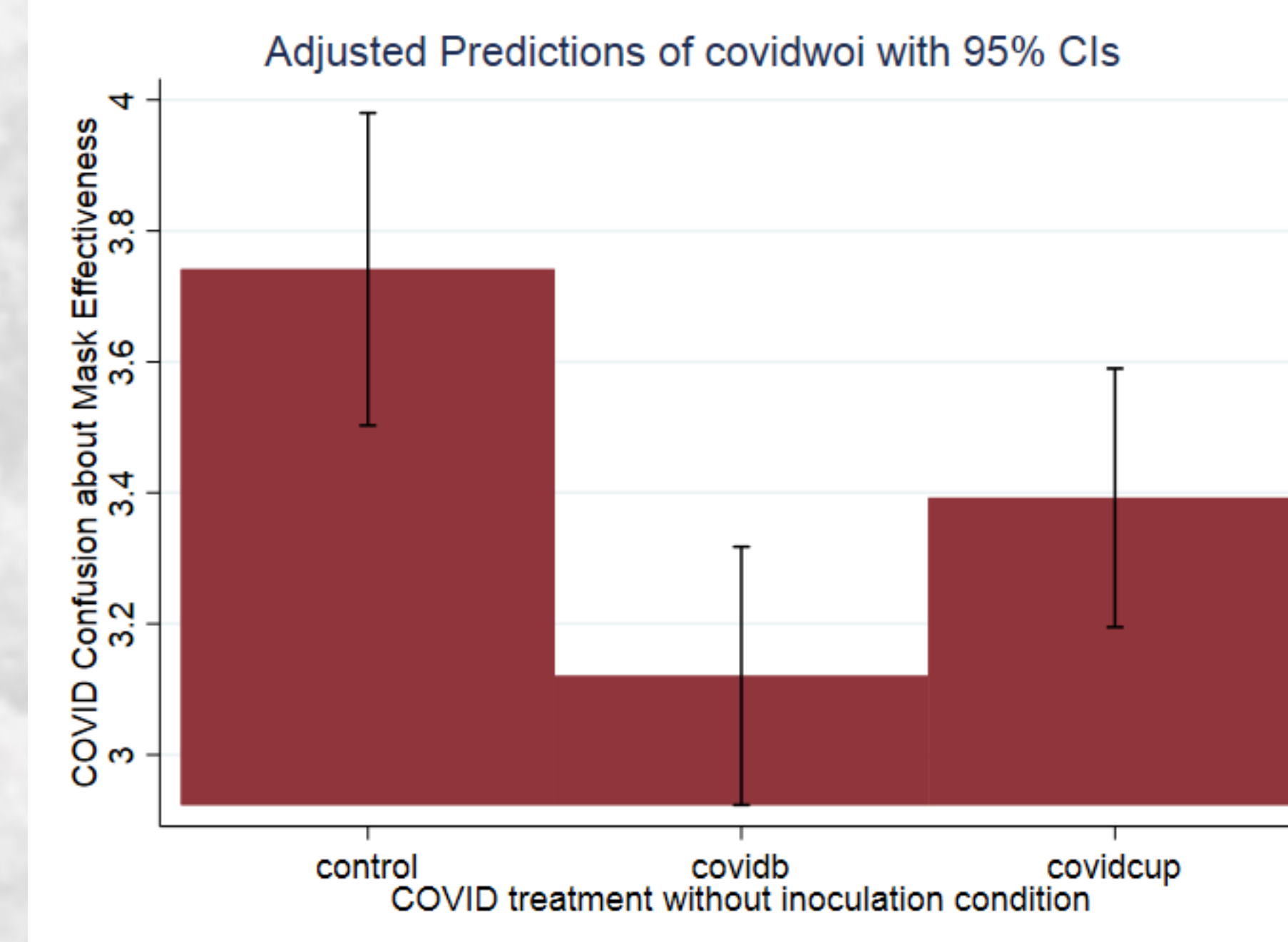
Study 1 – Interesting Findings

- In most of the perception of disagreement amongst health experts and politicians about who is most at risk, how dangerous it is, effectiveness of regular handwashing, and effectiveness of social distancing recommendations, being a Strong Republican was correlated with decrease in perception of disagreement.
- In almost every case, people were less likely to mention specific answer options (e.g., keep six feet, connect virtually, and so on) when they were assigned to the open-ended question. However, if we look at the social distancing confusion questions and we include an indicator for having received the open-ended question in a regression model with other demographic and partisanship predictors, we see that respondents do not report being more or less confused depending upon the version of the question they received. This is somewhat reassuring from a public health lens.
- There are statistically significant differences between the means of the social distancing recommendations (six feet, virtual connection, mask usage, close schools, close business, stay home, and self quarantine when sick) using the 95% confidence interval when running t-tests.

```
.  reg covidconfuse5 ib1.covidwoi

    Source |        SS          df       MS       Number of obs  =      812
                                                  F(2, 809)      =     7.91
     Model |  57.3245927         2  28.6622963    Prob > F       =   0.0004
  Residual |  2931.04363       809  3.62304528    R-squared      =   0.0192
                                                  Adj R-squared  =   0.0168
     Total |  2988.36823       811  3.68479436    Root MSE       =     1.9034

  covidconfu~5 |     Coef.   Std. Err.      t    P>|t|    [95% Conf. Interval]

      covidwoi |
       control |   .6697278   .1716388   3.90    0.000    .3328179   1.006638
      covidcup |   .3786091   .1547711   2.45    0.015    .0748088   .6824093
         _cons |   3.339934   .1093492  30.54    0.000    3.125292   3.554576
```

Table 7: Predicting confusion about whether there are any effective strategies for preventing COVID-19 spread by setting covid base treatment group as the base level here. For every unit increase in the control, there is a 0.6697 unit increase in confusion which is statistically significant as the P-value is 0.000. For every unit increase in exposure to politicization, there is a 0.3786 unit increase in confusion which is statistically significant as the P-value is 0.015.

Summary: Reading the coronavirus article decreases confusion about whether there are effective strategies to prevent COVID-19 spread, but when respondents were exposure to politicization in the article, they were more confused than when the article did not have any dimension of politicization.

Future Directions

- Figure out ways to mitigate the effects of politicization and confusion about health policies. Some potential ways could be to communicate clearly and filter out unnecessary confusion caused by the spread of misinformation via media and to disseminate messages from credible sources.
- Further exploratory analysis and post estimation of the results in relation to spillover behaviors with and without inoculation conditions.
- Examining backlash and support variables for the health policies and their adaptations by private corporations.

Acknowledgements

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