

# “It’s Not Fake News”: How Personal Experience Relates to Wearing a Mask During the Pandemic

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## INTRODUCTION

Over the last ten years, technology has drastically changed where people are getting their news from (Spinelli & Pellino, 2020). In this era of “fake news” many people see no harm in the circulation of fake news on the internet today. Covid-19 drastically changed that. Countless people argued that the pandemic was fake and even more refused to wear masks even though masks are proven to be very effective in preventing the spread of Covid-19 (Lyu & Wehby, 2020). It seems that in a world where everything is fake, only first-hand experiences can be trusted.

This study seeks to investigate if there is a correlation between having someone close die from Covid-19 and wearing a mask. There can be many reasons why people would refuse to wear a mask. One article proposes that western society has had difficulty with accepting universal masking for fear of identifying with non-indigenous culture and religious practice (Guangshu & Yi-Hua, 2020). It explains how these fears need to be rooted out partly by education and partly by mask design. Overall, this notion has caused a lot of Americans to not wear masks correctly or to not wear them at all even if all research advocates for wide acceptance for mask wearing as it protects us from this disease.

By testing to see if there is a relationship between having a family member or close friend die from COVID since March 1st and people who wear a mask, we can find correlations that will enable us to better understand the motivations of people. Testing this also gave us concrete data to show how people who don’t know of someone who died from Covid-19 are way more likely to refuse to wear a mask. Thus, our research results would prove useful for future studies, especially in the realm of psychology since it provides a baseline from where researches can begin to research the motivations for not wearing a mask for those who have not been directly affected by it.

PHYS6	Have you had a family member or close friend die from COVID-19 or respiratory illness since March 1, 2020?	1	(1) Yes
		2	(2) No
		77	(77) Not sure
		98	(98) SKIPPED ON WEB
		99	(99) REFUSED
PHYS2_2	[Worn a face mask] Which of the following measures, if any, are you taking in response to the coronavirus?	0	(0) No
		1	(1) Yes

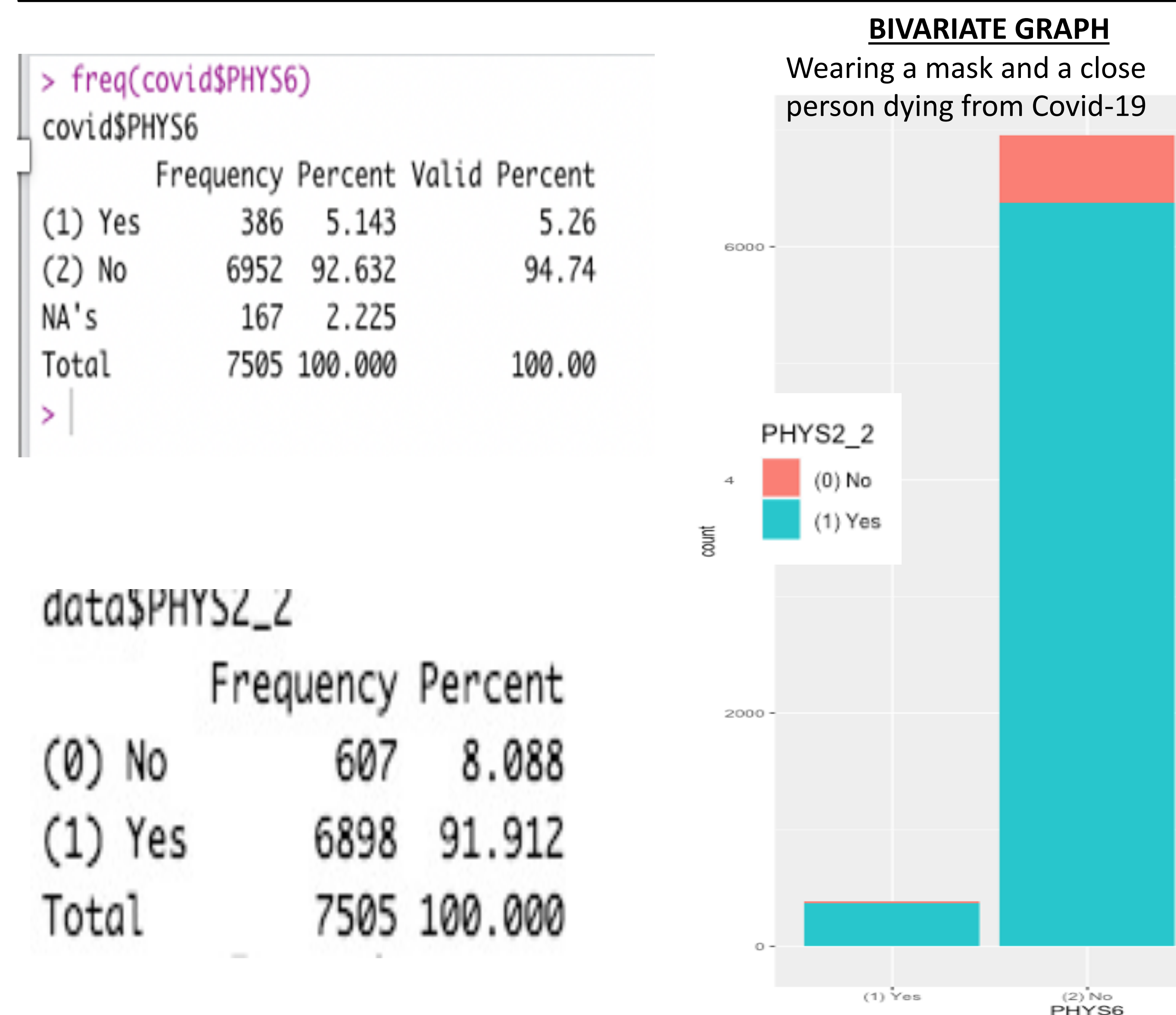
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## METHODS

We used the data provided by the COVID Impact Survey. The COVID Impact Survey was developed with support from leading experts across the country in public health, economics, and social sciences where they developed a survey for this project that includes three core modules focused on physical health, social and mental health, and economic and financial health. Interviews were conducted with adults age 18 and over representing the 50 states and the District of Columbia granting a sample size of over 7,000 people.

Our variables of interest were PHYS6 (asking if someone close to the person died from COVID) and the variable PHYS2\_2 which represented the question “[Worn a face mask] Which of the following measures, if any, are you taking in response to the coronavirus?”. These two variables are categorical data, much like a lot of the variables presented in the Impact Survey.



## METHODS(CONT.)

For our first variable, PHYS6, we did have to do some data management. Two of the values for the possible answers were “(77) Not sure” and “(99) SKIPPED ON WEB”. We recoded this variable, so these two options showed as “NA’s” on our frequency tables. For statistical tests we mainly used the Pearson’s Chi-squared test of independence due to the categorical nature of our variables. We initially established univariate graphs with each of our variables. We then conducted some more data management and then set up our bivariate graphs followed by Pearson’s Chi-squared test of independence

## RESULTS

PHYS6 represents if the person answering has had a family member or close friend die from COVID-19 since March 1, 2020. The table shows how 92.63% of those asked said “No” and 5.14% said “Yes”. NA’s have been omitted.

PHYS2\_2 represents if the people asked wore a facemask in response to COVID. The overwhelming majority of the people asked answered “Yes” with 91.91%. The remaining 8.08% answered “No”.

Chi-square test found a relationship between wearing a mask and having someone close die from Covid-19 ( $\chi^2 = 7.7087$ ,  $p = 0.001$ ).

```
~/Desktop/
> tbl <- table(covid$PHYS6, covid$PHYS2_2)
> chisq.test(tbl)

Pearson's Chi-squared test

data:  tbl
X-squared = 7.7087, df = 3, p-value = 0.05243
```

## CONCLUSIONS

When examining the association between having a close person die from COVID and wearing a face mask, a chi-squared test of independence revealed that people did not necessarily have to know someone who died to wear a facemask. More importantly, the test showed that people who did know someone close to them that died showed a smaller gap in responding that they did not wear a mask. In other words, comparing the people who did know someone who died and the people who didn’t, the sample of people who did know someone that died were more likely to wear a mask.

These findings are important for several reasons. Our results show how not knowing someone who has passed away from Covid-19 can decrease mask use in populations. This causes more infections and deaths. With this information, public health organizations and government agencies can begin to conduct campaigns aimed at people with no first-hand experience with death in order to educate and reduce the number of transmissions and ultimately reduce deaths.

For future research, we would like to incorporate more variables and conduct more statistical tests. Everyone in our group was completely new to the concepts covered in this class and coupled with the class being remote, this caused quite a learning curve that took some time getting used to the assignments to really begin to understand them. Having this knowledge, we can implement our research skills on different topics and begin our journey as junior data scientists