

Longwood University

## Digital Commons @ Longwood University

---

Fall Showcase for Research and Creative Inquiry

Office of Student Research

---

Fall 11-18-2020

### Relationship Between Big 5 Personality Traits and COVID-19 Health-Related Behaviors

Kelly Higgins  
*Longwood University*

Alyssa Martin  
*Longwood University*

Follow this and additional works at: [https://digitalcommons.longwood.edu/rci\\_fall](https://digitalcommons.longwood.edu/rci_fall)



Part of the [Psychology Commons](#)

---

#### Recommended Citation

Higgins, Kelly and Martin, Alyssa, "Relationship Between Big 5 Personality Traits and COVID-19 Health-Related Behaviors" (2020). *Fall Showcase for Research and Creative Inquiry*. 72.  
[https://digitalcommons.longwood.edu/rci\\_fall/72](https://digitalcommons.longwood.edu/rci_fall/72)

This Poster is brought to you for free and open access by the Office of Student Research at Digital Commons @ Longwood University. It has been accepted for inclusion in Fall Showcase for Research and Creative Inquiry by an authorized administrator of Digital Commons @ Longwood University. For more information, please contact [hamiltonma@longwood.edu](mailto:hamiltonma@longwood.edu), [alwinehd@longwood.edu](mailto:alwinehd@longwood.edu).



# Relationship Between Big 5 Personality Traits and COVID-19 Health-Related Behaviors



Kelly D. Higgins & Alyssa R. Martin  
Longwood University

## INTRODUCTION

- COVID-19 is an extremely contagious airborne virus which prompted the CDC to recommend the wearing of a mask in public spaces (CDC, 2020a). The CDC also suggested the avoidance of gatherings of 10 or more people and maintaining  $\geq 6$  feet apart from others in public settings (CDC, 2020b).
- The Big 5 personality traits are extraversion, agreeableness, conscientiousness, neuroticism, and openness to experience (McCrae & John, 1991).
- Previous research found that higher scores in agreeableness, extraversion and conscientiousness would indicate more frequent mask use (Zajenkowski et al., 2020; Abdelrahman et al., 2020; Aschwanden et al., 2020).
- Research conversely indicated that higher extraversion and agreeableness is associated with less frequent social distancing (Carvalho et al., 2020; Abdelrahman et al., 2020)
- In addition, higher conscientiousness scores were associated with greater social distancing behavior (Achswanden et al., 2020).

## HYPOTHESES

### Research Question

- Is the frequency of COVID-19 preventive behavior related to the Big 5 personality traits?

### Hypotheses

- Higher scores in agreeableness, extraversion, and conscientiousness would indicate more frequent mask use.
- Higher scores in agreeableness and extraversion would be associated with less frequent social distancing behavior.
- Higher scores in conscientiousness would be related to increased social distancing behavior.

## METHOD

### Measured Variables

- First Variable: Big 5 personality traits (agreeableness, extraversion, and conscientiousness)
- Second Variable: COVID-19 health-related behavior (mask use and social distancing)

### Participants

- 110 undergraduate participants

•  $M_{age} = 19.59$  years,  $SD = 2.227$  years, age range: 17 – 38 years

## References

- Abdelrahman, M. (2020). Personality traits, risk perception, and protective behaviors of Arab residents of Qatar during the COVID-19 pandemic. *International Journal of Mental Health and Addiction*. <https://doi.org/10.1007/s11469-020-00352-7>
- Aschwanden, D., Strickhouser, J. E., Sesker, A. A., Lee, J. H., Luchetti, M., Stephan, Y., Sutin, A. R., & Terracciano, A. (2020). Psychological and behavioural responses to coronavirus disease 2019: The role of personality. *European Journal of Personality*. <https://doi.org/10.1002/per.2281>
- Carvalho, L. F., Pianowski, G., & Goncalves, A. P. (2020). Personality differences and COVID-19: Are extraversion and conscientiousness personality traits associated with engagement with containment measures? *Trends in Psychiatry and Psychotherapy*, 42(2). <https://doi.org/10.1590/2237-6089-2020-0029>
- Centers for Disease Control and Prevention. (2020a). Considerations for wearing masks. Retrieved September 29, 2020, from <https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/cloth-face-cover-guidance.html>
- Centers for Disease Control and Prevention. (2020b). Social distancing. Retrieved September 29, 2020, from <https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/social-distancing.html>
- McCrae, R. R. & John, O. P. (1991). "An introduction to the Five-Factor Model and its applications. *The Journal of Analytical Psychology*. 60(2). <https://doi.org/10.1111/j.1467-6494.1992.tb00970.x>
- Zajenkowski, M., Joanson, P. K., Leniarska, M., & Kozakiewicz, Z. (2020). Who complies with the restrictions to reduce the spread of COVID-19? Personality and perceptions of the COVID-19 situation. *Personality and Individual Differences*, 166(1). <https://doi.org/10.1016/j.paid.2020.110199>

## MATERIALS & PROCEDURE

### Materials and Procedure

- Participants signed up via a university-managed experimentation website.
- Participants accessed a Google Form which consisted of 100 survey questions.
- The survey consisted of 3 sections: questions related to the Big 5 personality traits, questions assessing health-related behaviors including mask use and social distancing, and demographics.

### Example Questions

#### Big 5 Personality Trait:

- I see myself as someone who generally trusts others?

- 1- totally disagree
- 2- disagree a little
- 3- neutral opinion
- 4- agree a little
- 5- totally agree

#### Mask Use:

- How often do you wear a face covering when out in public in an indoor space, such as in a grocery store?

- 1- never
- 2- rarely
- 3- sometimes
- 4- often
- 5- always

#### Social Distancing:

- How often do you keep  $\geq 6$  feet apart when attending restaurants/bars with 10 or more people?

- 1- never
- 2- rarely
- 3- sometimes
- 4- often
- 5- always

#### General Health-Related Behavior

- How often do you discuss health concerns with your doctor?

- 1- never
- 2- rarely
- 3- sometimes
- 4- often
- 5- always

## RESULTS & DISCUSSION

### Results

- We conducted Pearson's  $r$  analyses. All initial hypotheses were unsupported by the data with the exception of a significant, positive correlation between agreeableness ( $M = 3.73$ ,  $SD = 0.59$ ) and mask use ( $M = 4.28$ ,  $SD = 0.54$ ),  $r(108) = .12$ ,  $p = .045$ .

### Discussion

#### Potential flaws:

- The results largely contradicted previous research.
- This may be because participants were already adhering to strict guidelines regarding both mask use and social distancing due to official state and university mandates.
- This may also be because the study was conducted later in the pandemic and protocols have become less abnormal to adhere to.

#### Implications for future research:

- Our research did indicate significant, positive correlations for openness to experience and mask use, as well as social distancing. These associations should be explored further in future research.

## TABLES & FIGURES

Table 1

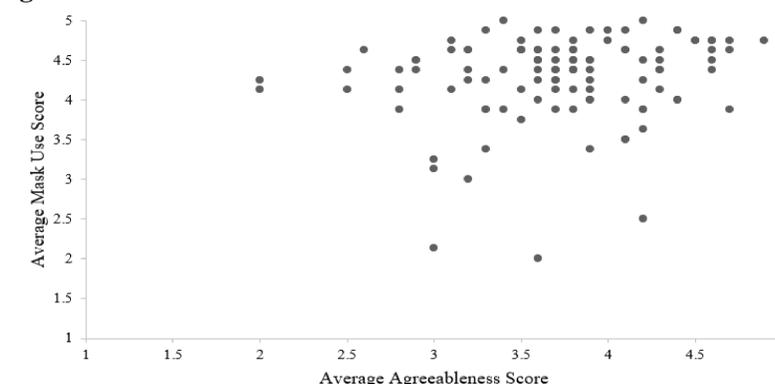
Descriptive Statistics and Correlations for Study Variables

Variable	$M$	$SD$	1	2	3	4	5	6	7
1. Mask Use	4.28	.54	--	.721**	.056	.298**	.192*	.103	.037
2. Social Distancing	3.63	.78	.721**	--	.005	.273**	.162	.176	.062
3. Extraversion	3.44	.72	.056	.005	--				
4. Openness to Experience	3.72	.65	.298**	.273**		--			
5. Agreeableness	3.73	.59	.192*	.162			--		
6. Conscientiousness	3.57	.69	.103	.176				--	
7. Neuroticism	3.49	.83	.037	.062					--

Note. The results of various bivariate Pearson's  $r$  correlations are shown above.

\* $p < .05$ . \*\* $p < .01$ .

Figure 1



Note. Each dot represents an individual participant. Scores for both average agreeableness and mask use were obtained using Likert-type scales. Higher levels of agreeableness were found to be significantly associated with higher frequencies of mask use.