**Cultural Antecedents of Virus Transmission: Individualism is Associated with Lower Compliance with Social Distancing Rules During the Covid-19 Pandemic**

**Supplemental Materials**

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**Pilot Study**

Materials used in the experimental manipulation:

[Solomon-individualism and Marshall-collectivism condition]

**The Solomon Islands**

The Solomon Islands lie 900 miles east of the Indonesian archipelago and 1100 miles north-east of Australia.

[Map showing Solomon Islands with reference to Australia and Indonesia.]

The people of the Solomon Islands are very individualistic. Below are some of the key characteristics of the people of Solomon Islands. Solomon Islanders do not like to depend on others. They prefer to be independent. Solomon Islanders rarely rely on other people for their day-to-day tasks and even for their emotional needs. They are self-reliant.

Solomon Islanders like to do their own things. They prefer individual activities over group activities. They like spending time with family but not too much. For Solomon Islanders, their personal identity, independent of others, is very important to them. They do not really identify with the group or the country as a whole. Solomon Islanders strongly feel that it is important that they do their job better than others. They strive to be the best.

In the Solomon Islands, winning is everything. Being in the second place doesn’t cut it. Everyone wants to be on the top. Given their remoteness, the people of the Solomon Islands believe that competition is the law of nature. They strongly believe in survival of the fittest. When other people perform better at a task than they do, Solomon Islanders get tense and aroused. They try to work harder to beat that person.

**The Marshall Islands**

Just 1400 miles north-east of the Solomon islands lie the Marshall Islands.

[Map showing Marshall Islands with reference to Australia and Indonesia.]

As different Pacific islands are isolated and far from each other, they developed unique cultures. Although the Marshall Islands and the Solomon Islands are relatively close, their cultures couldn’t be more different.

The people of the Marshall Islands are very collectivistic. Below are some of the key characteristics of the people of Marshall Islands. The well-being of their friends is very important to Marshall Islanders. If their friends are feeling sad, they feel sad, and if their friends are feeling happy, they feel happy. Marshall Islanders feel very proud if their friend wins a prize or does well at school or at work.

Marshall Islanders experience pleasure in spending time with others. Having a good meal or watching a good movie alone simply doesn’t feel as good as doing it with others. Marshall Islanders feel good when they cooperate with others. They don’t like competing with others. Life should be harmonious. In the Marshall Islands, parents and children try to stay together as much as possible. Joint families are still common.

Marshall Islanders feel that it is their duty to take care of their family, even if it means that they have to keep aside their personal preferences. More generally, Marshall Islanders believe that family members should stick together, no matter what sacrifices are required. Marshall Islanders believe that as members of a group, it is important to respect the decisions made by the group as a whole.

[In the Solomon-individualism and Marshall-collectivism condition, the above cultural descriptions were switched across the two countries.]

**Dependent measure:**

Although the Solomon Islands and the Marshall Islands had been fortunate to avoid Covid-19 until now, they could not stay safe for too long because the coronavirus was ravaging Indonesia.

The Solomon Islands and the Marshall Islands import a lot of their food and all manufactured goods from Indonesia.

With ship traffic, the virus spread from Indonesia to the Solomon Islands and the Marshall Islands.

As these two Islands do not have big hospitals and modern medical facilities, their governments ordered a lockdown.

Specifically, the government asked everyone to stay at their home at all times unless they were working in essential industries.

1. During the lockdown, in which country do you think people will be more likely to follow the lockdown regulations?

2. During the lockdown, in which country do you think people will be more likely to follow social-distancing guidelines?

3. During the lockdown, in which country do you think people will be more likely to follow stay-at-home guidelines?

4. During the lockdown, in which country do you think people will be more likely to follow the government's orders?

Participants who provided the following gibberish responses when asked to describe the culture of the Solomon / Marshall islands were excluded:

1. The Solomon Islands embodies many islander cultures and is very good. It uses palms as skirts and shirts.

Marshall Islands is very lame.

2. I’m not going home to the Luxurious and relaxing

**Study 1 & 2**

Table A1 presents the results on the effects of individualism on following social distancing rules without control variables. In Panel A, the coefficients on the interaction between and are negative and statistically significant (*p < 0.001*), suggesting that people in counties with higher individualism were less likely to follow social distancing rules. In Panel B, we rerun the analysis by using the residential mobility as the measure of individualism and we found similar results. In Panel C, we rerun the analysis without control variables for the cross-country mobility data. Again, we found similar results.

Table A1. Individualism and Compliance with Social Distancing Rules

Panel A: Vandello and Cohen (1999)’s Individualism

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Model 1 | Model 2 | Model 3 | Model 4 |
| Variables | *HomeDwell Time* | *%StayHome* | *%StayHome (NonWork)* | *PercentHome* |
|  |  |  |  |  |
| *Policy Stringency* | 4.575\*\*\* | 1.002\*\*\* | 1.107\*\*\* | 0.966\*\*\* |
|  | (4.26) | (19.19) | (20.25) | (11.40) |
| *Individualism × Policy Stringency* | -6.807\*\*\* | -0.142\*\*\* | -0.186\*\*\* | -0.097\*\* |
|  | (-17.50) | (-5.34) | (-6.70) | (-3.07) |
| *Ln(1+NewDeaths)* | 9.028\*\*\* | 1.268\*\*\* | 1.250\*\*\* | 0.904\*\*\* |
|  | (9.63) | (23.69) | (23.39) | (22.20) |
| *Constant* | 627.478\*\*\* | 27.044\*\*\* | 31.214\*\*\* | 76.806\*\*\* |
|  | (5,856.42) | (4,257.20) | (4,902.19) | (14,773.64) |
|  |  |  |  |  |
| County FE | YES | YES | YES | YES |
| Date FE | YES | YES | YES | YES |
| Observations | 1,145,966 | 1,145,966 | 1,145,966 | 1,145,966 |
| Adj. R-squared | 0.775 | 0.750 | 0.664 | 0.686 |

\*\*\**p* < 0.001, \*\**p* < 0.01, \**p* < 0.05. *T*-statistics are reported in parentheses. FE stands for fixed effects.

Panel B: Residential Mobility

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Model 1 | Model 2 | Model 3 | Model 4 |
| Variables | *HomeDwell Time* | *%StayHome* | *%StayHome (NonWork)* | *PercentHome* |
|  |  |  |  |  |
| *Policy Stringency* | 7.266\*\*\* | 1.196\*\*\* | 1.281\*\*\* | 1.225\*\*\* |
|  | (5.57) | (17.04) | (17.56) | (13.40) |
| *Mobility × Policy Stringency* | -3.643\*\*\* | -0.087 | -0.067 | -0.210\*\*\* |
|  | (-3.89) | (-1.96) | (-1.45) | (-3.86) |
| *Ln(1+NewDeaths)* | 11.310\*\*\* | 1.096\*\*\* | 1.095\*\*\* | 0.758\*\*\* |
|  | (11.91) | (18.51) | (18.43) | (17.86) |
| *Constant* | 673.133\*\*\* | 28.241\*\*\* | 32.367\*\*\* | 79.177\*\*\* |
|  | (3,156.94) | (2,088.07) | (2,380.08) | (7,333.89) |
|  |  |  |  |  |
| County FE | YES | YES | YES | YES |
| Date FE | YES | YES | YES | YES |
| Observations | 424,675 | 424,675 | 424,675 | 424,675 |
| Adj. R-squared | 0.827 | 0.841 | 0.797 | 0.810 |

\*\*\**p* < 0.001, \*\**p* < 0.01, \**p* < 0.05. *T*-statistics are reported in parentheses. FE stands for fixed effects.

Panel C: Cross-Country Individualism and Google Mobility

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 |
| Variables | *Parks* | *Grocercy &Pharmacy* | *Residential Places* | *Retail &Recreation* | *Workplace* |
|  |  |  |  |  |  |
| *Policy Stringency* | -18.353\*\*\* | -7.743\*\*\* | 4.731\*\*\* | -13.512\*\*\* | -7.542\*\*\* |
|  | (-8.03) | (-9.16) | (18.48) | (-14.99) | (-10.91) |
| *Individualism × Policy Stringency* | 5.032\*\*\* | 1.794\*\*\* | -0.637\*\*\* | 0.486 | 0.256 |
|  | (3.61) | (4.41) | (-3.53) | (0.96) | (0.64) |
| *Ln(1+NewDeaths)* | -7.458\*\*\* | -0.623 | 0.901\*\*\* | -2.792\*\*\* | -1.108\*\*\* |
|  | (-7.45) | (-1.39) | (6.35) | (-6.42) | (-3.69) |
| *Constant* | 17.890\*\*\* | -5.845\*\*\* | 8.395\*\*\* | -20.801\*\*\* | -21.370\*\*\* |
|  | (9.46) | (-7.01) | (31.77) | (-25.67) | (-38.18) |
|  |  |  |  |  |  |
| Country FE | Yes | Yes | Yes | Yes | Yes |
| Date FE | Yes | Yes | Yes | Yes | Yes |
| Observations | 25,130 | 25,251 | 25,256 | 25,257 | 25,255 |
| Adj. R-squared | 0.672 | 0.606 | 0.811 | 0.796 | 0.698 |

\*\*\**p* < 0.001, \*\**p* < 0.01, \**p* < 0.05. *T*-statistics are reported in parentheses. FE stands for fixed effects.

Table A2 presents the results on the effects of individualism and big five factors on following social distancing rules. In Panel A, the coefficients on the interaction between and are negative and statistically significant (*p < 0.001*), suggesting that people in counties with higher individualism were less likely to follow social distancing rules. In Panel B, we rerun the analysis by using the residential mobility as the measure of individualism and we found similar results. In Panel C, we run the analysis using the cross-country mobility data. We found that higher individualism still led to a weaker effect of containment policies on residents’ mobility patterns, though this effect was not statistically significant. This may be due to the reduced sample size. This is because after controlling for the big five factors, our observations dropped from 25,130 to 12,729 and the number of covered countries dropped from 79 to 40. Overall, even after controlling for big five factors, people in individualistic regions or countries were still less likely to follow social distancing rules.

Table A2. Individualism, Big Five Factors, and Google Mobility

Panel A: Vandello and Cohen (1999)’s Individualism, Rentfrow, Gosling, and Potter (2008)’ Big Five Factors and Compliance with Social Distancing Rules

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Model 1 | Model 2 | Model 3 | Model 4 |
| Variables | *HomeDwell Time* | *%StayHome* | *%StayHome (NonWork)* | *PercentHome* |
|  |  |  |  |  |
| *Policy Stringency* | 3.964\*\*\* | 0.907\*\*\* | 0.945\*\*\* | 0.983\*\*\* |
|  | (3.40) | (17.77) | (17.59) | (11.41) |
| *Individualism × Policy Stringency* | -5.443\*\*\* | -0.229\*\*\* | -0.231\*\*\* | -0.196\*\*\* |
|  | (-11.12) | (-8.63) | (-8.50) | (-4.60) |
| *MedianIncome × Policy Stringency* | 6.245\*\*\* | 0.508\*\*\* | 0.425\*\*\* | 0.619\*\*\* |
|  | (9.57) | (16.63) | (14.15) | (12.42) |
| *%HighEducation × Policy Stringency* | -1.447\* | 0.271\*\*\* | 0.307\*\*\* | -0.024 |
|  | (-2.29) | (8.54) | (9.58) | (-0.53) |
| *%Minority × Policy Stringency* | -0.692 | -0.344\*\*\* | -0.322\*\*\* | -0.362\*\*\* |
|  | (-1.14) | (-10.41) | (-9.56) | (-6.71) |
| *PopulationDensity × Policy Stringency* | -0.024 | 0.036 | 0.022 | 0.003 |
|  | (-0.05) | (0.90) | (0.64) | (0.12) |
| *Population × Policy Stringency* | 2.373\*\*\* | 0.177\*\* | 0.172\*\*\* | 0.096\*\* |
|  | (3.57) | (3.09) | (3.30) | (3.11) |
| *%Over65YearsOld × Policy Stringency* | -1.634\*\*\* | -0.183\*\*\* | -0.185\*\*\* | -0.124\*\*\* |
|  | (-3.68) | (-8.38) | (-7.91) | (-3.52) |
| *TrumpVote × Policy Stringency* | -3.886\*\*\* | -0.490\*\*\* | -0.502\*\*\* | -0.527\*\*\* |
|  | (-6.96) | (-16.76) | (-16.54) | (-12.79) |
| *E × Policy Stringency* | -0.818\* | -0.017 | -0.049\* | -0.055 |
|  | (-2.04) | (-0.80) | (-2.29) | (-1.91) |
| *A × Policy Stringency* | 1.879\*\* | 0.066 | 0.041 | 0.029 |
|  | (2.82) | (1.77) | (1.10) | (0.43) |
| *C × Policy Stringency* | -0.601 | -0.032 | -0.009 | -0.020 |
|  | (-1.67) | (-1.41) | (-0.37) | (-0.58) |
| *N × Policy Stringency* | 2.850\*\*\* | 0.082\*\*\* | 0.078\*\*\* | 0.113\*\* |
|  | (6.50) | (3.65) | (3.44) | (3.15) |
| *O × Policy Stringency* | 0.077 | -0.012 | 0.108\*\*\* | -0.195\*\*\* |
|  | (0.16) | (-0.49) | (4.28) | (-4.69) |
| *Ln(1+NewDeaths)* | 3.364\*\*\* | 0.624\*\*\* | 0.606\*\*\* | 0.444\*\*\* |
|  | (4.26) | (16.37) | (16.09) | (13.18) |
| *Constant* | 629.726\*\*\* | 27.008\*\*\* | 31.147\*\*\* | 76.915\*\*\* |
|  | (5,055.21) | (4,702.45) | (5,351.88) | (11,208.52) |
|  |  |  |  |  |
| County FE | YES | YES | YES | YES |
| Date FE | YES | YES | YES | YES |
| Observations | 1,136,038 | 1,136,038 | 1,136,038 | 1,136,038 |
| Adj. R-squared | 0.778 | 0.783 | 0.702 | 0.706 |

\*\*\**p* < 0.001, \*\**p* < 0.01, \**p* < 0.05. *T*-statistics are reported in parentheses. FE stands for fixed effects. E = Extraversion, A = Agreeableness, C = Conscientiousness, N = Neuroticism, and O = Openness.

Panel B: Residential Mobility, Rentfrow, Gosling, and Potter (2008)’ Big Five Factors and Compliance with Social Distancing Rules

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Model 1 | Model 2 | Model 3 | Model 4 |
| Variables | *HomeDwell Time* | *%StayHome* | *%StayHome (NonWork)* | *PercentHome* |
|  |  |  |  |  |
| *Policy Stringency* | -2.012 | 0.176\* | 0.196\*\* | 0.504\*\*\* |
|  | (-1.37) | (2.52) | (2.72) | (5.53) |
| *Mobility × Policy Stringency* | -2.631\*\* | -0.080\* | -0.062 | -0.173\*\*\* |
|  | (-3.13) | (-2.15) | (-1.63) | (-4.30) |
| *MedianIncome × Policy Stringency* | 9.351\*\*\* | 0.588\*\*\* | 0.514\*\*\* | 0.685\*\*\* |
|  | (15.74) | (18.96) | (15.34) | (16.77) |
| *%HighEducation × Policy Stringency* | -2.623\*\*\* | 0.230\*\*\* | 0.244\*\*\* | -0.050 |
|  | (-4.03) | (5.97) | (5.91) | (-1.15) |
| *%Minority × Policy Stringency* | 2.605\*\*\* | -0.190\*\*\* | -0.166\*\*\* | -0.255\*\*\* |
|  | (3.90) | (-5.21) | (-4.43) | (-6.24) |
| *PopulationDensity × Policy Stringency* | -0.073 | 0.010 | -0.001 | -0.002 |
|  | (-0.21) | (0.39) | (-0.03) | (-0.11) |
| *Population × Policy Stringency* | 1.519\*\*\* | 0.108\*\* | 0.111\*\* | 0.051\*\* |
|  | (3.54) | (2.91) | (3.16) | (2.89) |
| *%Over65YearsOld × Policy Stringency* | -1.898\*\* | -0.145\*\*\* | -0.133\*\*\* | -0.154\*\*\* |
|  | (-3.03) | (-4.66) | (-4.02) | (-3.87) |
| *%TrumpVote × Policy Stringency* | -3.012\*\*\* | -0.513\*\*\* | -0.526\*\*\* | -0.521\*\*\* |
|  | (-4.13) | (-13.22) | (-13.08) | (-12.51) |
| *E × Policy Stringency* | 1.065\* | 0.112\*\*\* | 0.078\*\* | 0.048 |
|  | (2.20) | (4.07) | (2.74) | (1.61) |
| *A × Policy Stringency* | 1.061 | 0.016 | 0.028 | -0.022 |
|  | (1.47) | (0.27) | (0.47) | (-0.45) |
| *C × Policy Stringency* | -0.873 | -0.063\* | -0.034 | -0.031 |
|  | (-1.69) | (-1.96) | (-0.98) | (-0.88) |
| *N × Policy Stringency* | 2.988\*\*\* | 0.149\*\*\* | 0.164\*\*\* | 0.126\*\*\* |
|  | (6.07) | (4.93) | (5.25) | (3.98) |
| *O × Policy Stringency* | 1.340\* | 0.073\* | 0.231\*\*\* | -0.165\*\*\* |
|  | (2.36) | (2.00) | (5.84) | (-5.07) |
| *Ln(1+NewDeaths)* | 6.070\*\*\* | 0.562\*\*\* | 0.546\*\*\* | 0.403\*\*\* |
|  | (7.71) | (13.18) | (12.87) | (10.80) |
| *Constant* | 673.654\*\*\* | 28.273\*\*\* | 32.383\*\*\* | 79.220\*\*\* |
|  | (3,736.06) | (2,696.23) | (3,041.08) | (7,652.14) |
|  |  |  |  |  |
| County FE | YES | YES | YES | YES |
| Date FE | YES | YES | YES | YES |
| Observations | 423,874 | 423,874 | 423,874 | 423,874 |
| Adj. R-squared | 0.837 | 0.871 | 0.832 | 0.823 |

\*\*\**p* < 0.001, \*\**p* < 0.01, \**p* < 0.05. *T*-statistics are reported in parentheses. FE stands for fixed effects. E = Extraversion, A = Agreeableness, C = Conscientiousness, N = Neuroticism, and O = Openness.

Panel C: Individualism, Big Five Factors and Google Mobility

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 |
| Variables | *Parks* | *Grocercy &Pharmacy* | *Residential Places* | *Retail &Recreation* | *Workplace* |
|  |  |  |  |  |  |
| *Policy Stringency* | -8.765\* | -8.402\*\*\* | 4.253\*\*\* | -11.334\*\*\* | -7.819\*\*\* |
|  | (-2.24) | (-4.70) | (5.62) | (-6.17) | (-4.29) |
| *Individualism × Policy Stringency* | 0.243 | 1.375 | -0.448 | 0.936 | 0.663 |
|  | (0.12) | (1.86) | (-1.32) | (0.87) | (0.85) |
| *GDP Per Capita × Policy Stringency* | 6.983 | 1.866 | -1.083 | 3.822\* | 2.759 |
|  | (1.66) | (1.42) | (-1.74) | (2.29) | (1.89) |
| *PopuDensity × Policy Stringency* | -0.973 | 0.081 | 0.229 | -0.580 | -0.838 |
|  | (-0.69) | (0.08) | (0.66) | (-0.74) | (-0.85) |
| *Population × Policy Stringency* | -1.843 | 0.222 | 0.090 | 0.220 | -0.655 |
|  | (-0.55) | (0.19) | (0.16) | (0.18) | (-0.56) |
| *Life Expectancy × Policy Stringency* | -8.015 | 1.891 | 1.195 | -3.080 | -1.145 |
|  | (-1.27) | (0.73) | (0.98) | (-1.22) | (-0.46) |
| *Median Age × Policy Stringency* | 0.625 | -1.453 | -0.215 | -1.624 | -0.846 |
|  | (0.18) | (-0.96) | (-0.30) | (-1.07) | (-0.58) |
| *E × Policy Stringency* | -0.805 | -2.748\* | 0.862 | -2.424 | -2.970\* |
|  | (-0.28) | (-2.07) | (1.55) | (-1.73) | (-2.20) |
| *A × Policy Stringency* | 2.058 | -1.482\* | 0.611\* | -1.547 | -1.403 |
|  | (1.13) | (-2.07) | (2.08) | (-1.75) | (-1.91) |
| *C × Policy Stringency* | -7.802\*\* | -0.415 | 0.473 | -1.178 | 0.136 |
|  | (-2.98) | (-0.41) | (0.91) | (-0.92) | (0.12) |
| *N × Policy Stringency* | -5.597\* | -2.573\* | 0.951 | -2.028 | -1.266 |
|  | (-2.03) | (-2.06) | (1.65) | (-1.60) | (-1.01) |
| *O × Policy Stringency* | -1.320 | -0.707 | 0.020 | -0.998 | -0.064 |
|  | (-0.87) | (-1.49) | (0.09) | (-1.29) | (-0.15) |
| *Ln(1+NewDeaths)* | -6.256\*\*\* | -1.066\* | 0.916\*\*\* | -2.955\*\*\* | -1.461\*\*\* |
|  | (-3.73) | (-2.56) | (5.27) | (-5.27) | (-5.22) |
| *Constant* | 34.934\*\*\* | -3.322\*\* | 6.968\*\*\* | -18.299\*\*\* | -21.765\*\*\* |
|  | (9.68) | (-3.46) | (18.51) | (-15.37) | (-34.06) |
|  |  |  |  |  |  |
| Country FE | Yes | Yes | Yes | Yes | Yes |
| Date FE | Yes | Yes | Yes | Yes | Yes |
| Observations | 12,729 | 12,748 | 12,752 | 12,752 | 12,752 |
| Adj. R-squared | 0.676 | 0.573 | 0.824 | 0.801 | 0.713 |

\*\*\**p* < 0.001, \*\**p* < 0.01, \**p* < 0.05. *T*-statistics are reported in parentheses. FE stands for fixed effects.

In additional analyses, we tested whether people in culturally tighter states would be more likely to follow social distancing rules. In tighter cultures, people are more likely to follow social norms (Boldt, 1978; Gelfand et al., 2011; Triandis, 1989). Given that stay-at-home orders are government-issued orders about what people should so, we would expect that people in tighter regions to follow regulations during lockdowns.

We obtained state-level tightness scores from Harrington and Gelfand (2010) and tested it as a predictor. Table A3 shows the results on the effect of tightness on percentage of people following social distancing rules. In Model 1, the coefficient of the interaction between and is 1.283 (*p < 0.01*), indicating that people in tighter states are *more* likely to follow social distancing rules. In Models 2 and 3, however, when our dependent variable is the percent of devices that are completely at home, the coefficients of the interaction become negative. In Model 4, when we look at the median percentage of time devices are found at home for all devices in each county on each day, the coefficient on the interaction becomes positive. Overall, the findings are mixed: when we look at less conservative measures of staying-at-home (i.e., in Models 1 and 4), people in tighter states are *more* likely to follow social distancing rules; however, when we look at more conservative measures of staying-at-home, people in tighter states are *less* likely to follow social distancing rules.

Furthermore, in Models 1 to 4, the coefficients of the interaction between and are -6.189 (*p < 0.001*), -0.272 (*p < 0.001*), -0.351 (*p < 0.001*), and -0.174 (*p < 0.001*), respectively, indicating that even after controlling for tightness, the effect of individualism remains significant and negative.

Table A3 Individualism, Tightness and Compliance with Social Distancing Rules

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Model 1 | Model 2 | Model 3 | Model 4 |
| Variables | *HomeDwell Time* | *%StayHome* | *%StayHome (NonWork)* | *PercentHome* |
|  |  |  |  |  |
| *Policy Stringency* | 4.134\*\*\* | 0.876\*\*\* | 0.940\*\*\* | 0.951\*\*\* |
|  | (3.65) | (17.63) | (17.82) | (11.69) |
| *Individualism × Policy Stringency* | -6.189\*\*\* | -0.272\*\*\* | -0.351\*\*\* | -0.174\*\*\* |
|  | (-15.05) | (-12.55) | (-15.25) | (-5.37) |
| *Tightness × Policy Stringency* | 1.283\*\* | -0.051\* | -0.187\*\*\* | 0.093\*\* |
|  | (2.91) | (-2.26) | (-7.74) | (2.61) |
| *MedianIncome × Policy Stringency* | 6.255\*\*\* | 0.479\*\*\* | 0.358\*\*\* | 0.610\*\*\* |
|  | (10.13) | (16.84) | (12.74) | (12.94) |
| *Education × Policy Stringency* | -1.804\*\* | 0.280\*\*\* | 0.362\*\*\* | -0.046 |
|  | (-2.84) | (8.92) | (11.35) | (-1.02) |
| *Minority × Policy Stringency* | -1.814\*\* | -0.349\*\*\* | -0.289\*\*\* | -0.415\*\*\* |
|  | (-3.05) | (-10.08) | (-7.97) | (-7.10) |
| *PopuDensity × Policy Stringency* | 0.078 | 0.038 | 0.028 | 0.006 |
|  | (0.16) | (0.96) | (0.79) | (0.24) |
| *Population × Policy Stringency* | 2.456\*\*\* | 0.172\*\* | 0.162\*\* | 0.091\*\* |
|  | (3.54) | (3.03) | (3.12) | (3.09) |
| *Over65Ratio × Policy Stringency* | -1.794\*\*\* | -0.204\*\*\* | -0.216\*\*\* | -0.143\*\*\* |
|  | (-4.05) | (-9.25) | (-9.19) | (-3.93) |
| *TrumpVote × Policy Stringency* | -5.144\*\*\* | -0.471\*\*\* | -0.423\*\*\* | -0.568\*\*\* |
|  | (-8.01) | (-13.97) | (-11.87) | (-11.59) |
| *Ln(1+NewDeaths)* | 3.568\*\*\* | 0.632\*\*\* | 0.612\*\*\* | 0.454\*\*\* |
|  | (4.41) | (16.45) | (16.25) | (13.72) |
| *Constant* | 629.934\*\*\* | 27.004\*\*\* | 31.156\*\*\* | 76.899\*\*\* |
|  | (5,977.69) | (5,388.05) | (6,204.96) | (13,806.92) |
|  |  |  |  |  |
| County FE | YES | YES | YES | YES |
| Date FE | YES | YES | YES | YES |
| Observations | 1,136,038 | 1,136,038 | 1,136,038 | 1,136,038 |
| Adj. R-squared | 0.778 | 0.783 | 0.702 | 0.706 |

\*\*\**p* < 0.001, \*\**p* < 0.01, \**p* < 0.05. *T*-statistics are reported in parentheses. FE stands for fixed effects.

**Study 3**

We used these pre-screen questions to select participants:

(1) “**How** **many weeks** did you live under a Covid-19 lockdown, that is, when people were prohibited from leaving their home except for essential items (e.g., food and medicine)?”

The response options ranged from 0 week, 1 week, 2 weeks, …, 9 weeks,10 or more weeks. Only participants who selected 1 week or more were eligible.

(2) “During the lockdown, did you **work in essential services** and thus had to go to work even during the lockdown (e.g., food delivery, grocery store, medical facility)?”

The response options were *Yes* and *No*. Only participants who selected “No” were eligible.

Measures

Individualism (taken from Triandis & Gelfand (1998))

1. I'd rather depend on myself than others.

2. I rely on myself most of the time; I rarely rely on others.

3. I often do "my own thing."

4. My personal identity, independent of others, is very important to me.

5. It is important that I do my job better than others.

6. Winning is everything.

7. Competition is the law of nature.

8. When another person does better than I do, I get tense and aroused.

Violating Social Distancing Rules

Think about the time when you were living under a lockdown, that is, when people were prohibited from leaving their home except for essential items (e.g., food and medicine).

1. During the lockdown, how often did you leave your home to relieve your boredom?

2. During the lockdown, how often did you physically meet your friends or significant other who were not living with you?

3. During the lockdown, how often did you go out in places where there were many other people around?

4. During the lockdown, how often did you visit parks, beaches, or other outdoor areas that were closed?

5. During the lockdown, how often did you loiter around in public places?

6. During the lockdown, how often did you go to supermarkets to buy non-essential items?

Tightness (taken from Li, Fock, & Mattila (2012))

1. I have clear expectations of what behaviors are appropriate or inappropriate in most situations in our society.

2. I have clear expectations of how people should act in most situations in our society.

3. I have clear expectations of what social norms are appropriate or inappropriate in most situations in our society.

4. I think people are supposed to follow the social norms in our society.

5. I think people should not have a great deal of freedom in deciding how they want to behave in most situations.

Political Orientation

1. Please indicate your political orientation:

(1) strongly liberal

(2) moderately liberal

(3) somewhat liberal

(4) neither liberal nor conservative

(5) somewhat conservative

(6) moderately conservative

(7) strongly conservative

2. Please indicate your political orientation:

(1) strongly left

(2) moderately left

(3) somewhat left

(4) neither left nor right

(5) somewhat right

(6) moderately right

(7) strongly right

3. Please indicate your political orientation:

(1) strongly democrat

(2) moderately democrat

(3) somewhat democrat

(4) neither democrat nor republican

(5) somewhat republican

(6) moderately republican

(7) strongly republican

Participants who provided the following gibberish responses when asked to describe the measures that they responded to in the survey were excluded:

1. POINT OF VIEW

2. it is perfect

3. good survey

4. very interesting

5. this survey is very nice

6. well

7. Surveys are used to increase knowledge in fields such as social research and demography. Survey research is often used to assess thoughts, opinions, and feelings. Surveys can be specific and limited, or they can have more global, widespread goals.

8. interesting survey

Results with controlling for tightness

We took into account the effect of another relevant cultural dimension––tightness-looseness, which is defined as “the strength of social norms and the degree of sanctioning within societies” (Gelfand et al., 2006, p. 1226). In tight cultures, there are clear norms, and deviations from these norms are punished; in loose cultures, there are unclear norms, and deviations from the norms are tolerated (Triandis, 1989). Individualism-collectivism is distinct from tightness-looseness in that individualism-collectivism emphasizes the extent to which individuals in a culture prioritize their personal interests over those of the group, whereas tightness-looseness emphasizes the prevalence and strength of social norms in a culture (Triandis, 1989). Although the two dimensions are moderately correlated (Carpenter, 2000; Triandis, 1989), there exist societies in all four quadrants of the individualistic-collectivistic X tight-loose map (Harrington & Gelfand, 2014). Further, given that extant research has showed that tightness may influence people’s compliance with social distancing rules (Im & Chen, 2020), we controlled for tightness in our analyses to rule out its potential effect on our results.

We measured participants’ cultural tightness—the degree to which they perceived the existence of strong norms in their society—using the 5-item scale developed by Li et al. (2012). Participants were asked to respond to sample items such as "I think people are supposed to follow the social norms in our society" on a 7-point scale ranging from "strongly disagree" to "strongly agree."

Table A4

*Descriptive Statistics and Correlations*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Variables | *M* | *SD* | 1 | 2 | 3 | 4 |
| 1. Political orientation | 3.94 | 1.56 | (.93) |  |  |  |
| 2. Tightness | 5.35 | .72 | .25\* | (.63) |  |  |
| 3. Individualism | 4.86 | .77 | .23\* | .15 | (.74) |  |
| 4. Violating social distancing rules | 1.89 | .87 | .17 | .05 | .27\* | (.91) |

*N* = 89. Reliability coefficients are displayed on the diagonal in parentheses.

\**p* < .05, \*\**p* < .01, \*\*\**p* < .001 (two-tailed).

Table A5

*Regression Results with Violating Social Distancing Rules* *as the Dependent Variable*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Variables | Model 1 | | Model 2 | |
| *B* | *SE* | *B* | *SE* |
| Intercept | 1.46\* [.09, 2.83] | .69 | .40 [-1.23, 2.03] | .82 |
| Political orientation | .10 [-.03, .22] | .06 | .07 [-.05, .19] | .06 |
| Tightness | .01 [-.25, .27] | .13 | -.02 [-.28, .24] | .13 |
| Individualism |  |  | .27\* [.03, .51] | .12 |
| ∆*R*2 | .03 | | .06\* | |

*N* = 89. \**p* < .05, \*\**p* < .01, \*\*\**p* < .001 (two-tailed).

**Study 4 (US Sample)**

Measures

Violating Social Distancing Rules

Think about the time when you were living under a lockdown. We want to learn about how often you left home for reasons other than purchasing essential items (food and medicines) and getting exercise.

1. During the lockdown, how often did you leave your home to relieve your boredom?

2. During the lockdown, how often did you physically meet your friends or significant other who were not living with you?

3. During the lockdown, how often did you go out in places where there were many other people around?

4. During the lockdown, how often did you visit parks, beaches, or other outdoor areas that were closed?

5. During the lockdown, how often did you loiter around in public places?

6. During the lockdown, how often did you go to supermarkets to buy non-essential items?

Compliance with Government Order

1. To what extent do you think people should comply with government rules?

2. To what extent do you think people should follow the government’s regulations?

3. To what extent do you think people should do what the government asks them to do?

Compliance with Social Norm (taken from Bizer, Magin, & Levine (2014))

1. If more people followed society’s rules, the world would be a better place.

2. People need to follow life’s unwritten rules every bit as strictly as they follow the written rules.

3. People who do what society expects of them lead happier lives.

4. Our society is built on unwritten rules that members need to follow.

5. I am at ease only when everyone around me is adhering to society’s norms.

6. I always do my best to follow society’s rules.

Perceived Vulnerability of Catching Covid-19

Before the first Covid-19 lockdown in your locality, to what extent did you think that:

1. I am unlikely to be infected with Covid-19.

2. There is a low likelihood that I will get infected with Covid-19.

3. I am not vulnerable to Covid-19.

4. Catching Covid-19 is something that will never happen to me.

Selfishness (taken from Raine & Uh (2019))

We can’t always be charitable to others, and there are times when you have to look after your own self-interests. Answer the following questions as honestly as you can.

1. I’m not too concerned about what is best for society in general.

2. I don’t give to charities.

3. When it comes to helping myself or helping others, I tend to help myself.

4. Quite often in life, it is more important to receive than to give.

5. It’s better to save for a rainy day than to give to charities where money can be misspent.

6. I care for myself much more than I care for others.

7. Even when I see people in need, I don’t feel the urge to help them.

8. At the end of the day, I have to admit that I’m quite a selfish person.

Sympathy (taken from Batson, Turk, Shaw, & Klein (1995))

1. I tend to feel sympathetic toward others.

2. I tend to feel compassionate toward others.

3. I tend to feel softhearted toward others.

4. I tend to feel tender toward others.

Desire for Freedom (taken from Rokeach (1973))

1. I have a strong desire for independence.

2. Free choice is important for me.

3. I am eager to freedom.

4. I prefer to no any restrictions placed on me.

Prosocial Motivation (taken from Grant (2008))

1. I care about benefiting others.

2. I want to help others.

3. I want to have positive impact on others.

4. It is important to me to do good for others.

Optimism toward Covid-19 (adapted from Scheier & Carver (1985))

1. In the current Covid-19 situation, I expect the best.

3. I look forward to the bright future beyond Covid-19.

4. I am optimistic about the future of the Covid-19 pandemic.

7. Regarding the current Covid-19 situation, I am a believer in the idea that "every cloud has a silver lining."

2. During the current challenging period, if something can go wrong for me, it will.

5. During the current challenging period, I don’t expect things to go my way.

6. During the current challenging period, things never work out the way I want them to.

8. During the current challenging period, I rarely count on good things happening to me.

Boredom during Lockdown

Think about the time when you were living under a Covid-19 lockdown in your locality.

1. How bored did you feel during the lockdown?

2. How idle were you during the lockdown?

3. How dull was your life during the Covid-19 lockdown?

**Study 4 (UK Sample)**

Participants who provided the following gibberish or irrelevant responses when asked to describe the measures that they responded to in the survey were excluded:

1. Behaviour within society regarding Covid 19

2. Disappointment and mistrust of political leadership.

3. Follow the rules but be compassionate to others, selfishness is ugly

4. Confidence, morality, caring, mental balance, happiness

5. About how much I help charity and care for others

6. Nothing to say

7. To decide my attitude to helping others and towards others in general

8. How you feel

9. Social behaviour

10. The statements seek to know if there is a correlation between moral and ethical beliefs held by an individual and how these beliefs affect their behavior in society in general.

11. Response and behaviour towards rules

12. Na

13. Freedom

14. I am a positive independent person

15. how we look at authority

16. There are expectations for people to follow social norms as they would government rules.

17. I do as I am told

18. Social freedoms and whether people should be allowed to have more choice in how they behave or should adhere strictly to rules set out for them

19. Overall the statements show that I am a big advocate of personal freedom in the sense that the laws should not dictate how one should behave, however sociatal norms should be followed in order to have a civilised society.

20. People should be free to do whatever they want. As long as they arent hurting anybody.

21. behaviour in restricted environment

22. It appears I am being questioned about following rules – compliance

23. The statements refer to adhering to rules and social norms, to how people tend to focus on their needs more than the needs of others and to the degree of freedom viewed as a personal construct, lined with the ability to make free and independent choices.

24. I like freedom but I feel strongly society would be a better place if more people followed some of the expected norms of society, that doesn't mean I don't think governments should not be questioned or held accountable though. I feel if more people didn't steal, behave antisocially or hurt others then the world would be so much better.

25. not sure

Results with controlling for tightness

We used the same measure as in Study 3 to measure participants’ cultural tightness.

Table A6

*Regression Results with Violating Social Distancing Rules as the Dependent Variable*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Variables | Model 1 | | Model 2 | |
| *B* | *SE* | *B* | *SE* |
| Intercept | 1.78\*\*\* [1.26, 2.30] | .26 | .98\*\* [.35, 1.62] | .33 |
| Physically active before Covid-19 | .10\*\*\* [.05, .14] | .03 | .10\*\*\* [.05, .15] | .02 |
| Political orientation | .08\*\* [.03, .13] | .03 | .07\*\* [.02, .12] | .03 |
| Tightness | -.11\* [-.20, -.02] | .05 | -.13\*\*[-.22 -.03] | .05 |
| Individualism |  |  | .19\*\*\* [.10, .29] | .05 |
| ∆*R*2 | .06\*\*\* | | .03\*\*\* | |

Note. *N* = 448. Ϯ*p* < .10, \**p* < .05, \*\**p* < .01, \*\*\**p* < .001 (two-tailed).

Table A7

*Descriptive Statistics and Correlations*

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Variables | *M* | *SD* | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| 1. Physically active before Covid-19 | 3.83 | 1.59 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2. Political orientation | 3.43 | 1.56 | .03 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 3. Tightness | 5.19 | .84 | .03 | .21\*\*\* | (.71) |  |  |  |  |  |  |  |  |  |  |  |
| 4. Individualism | 4.76 | .82 | -.02 | .11\* | .12\* | (.71) |  |  |  |  |  |  |  |  |  |  |
| 5. Selfishness | 3.18 | 1.06 | .02 | .18\*\*\* | .01 | .20\*\*\* | (.83) |  |  |  |  |  |  |  |  |  |
| 6. Desire for freedom | 5.64 | .96 | -.02 | -.09Ϯ | -.08Ϯ | .44\*\*\* | .03 | (.78) |  |  |  |  |  |  |  |  |
| 7. Boredom | 3.66 | 1.76 | -.09Ϯ | .02 | .07 | .19\*\*\* | .12\* | .17\*\*\* | (.89) |  |  |  |  |  |  |  |
| 8. Sympathy | 5.55 | 1.12 | -.00 | -.18\*\*\* | .07 | -.05 | -.58\*\*\* | .13\*\* | -.04 | (.93) |  |  |  |  |  |  |
| 9. Prosocial motivation | 5.73 | 1.02 | .02 | -.17\*\*\* | .08Ϯ | .02 | -.58\*\*\* | .16\*\* | .03 | .72\*\*\* | (.92) |  |  |  |  |  |
| 10. Compliance with social norm | 4.69 | 1.19 | .09Ϯ | .28\*\*\* | .58\*\*\* | .05 | -.03 | -.12\* | .10\* | .10\* | .12\* | (.90) |  |  |  |  |
| 11. Compliance with government order | 5.48 | 1.29 | .07 | .03 | .39\*\*\* | -.05 | -.10\* | -.13\*\* | .00 | .12\* | .13\*\* | .53\*\*\* | (.95) |  |  |  |
| 12. Optimism | 4.57 | 1.23 | .13\*\* | .05 | .03 | -.02 | -.23\*\*\* | .05 | -.26\*\*\* | .22\*\*\* | .20\*\*\* | .03 | .09Ϯ | (.89) |  |  |
| 13. Perceived vulnerability of catching Covid-19 | 3.18 | 1.58 | .02 | .12\* | .03 | .14\*\* | .20\*\*\* | .02 | .12\* | -.14\*\* | -.10\* | -.03 | -.12\* | .14\*\* | (.87) |  |
| 14. Violating social distancing rules | 1.86 | .85 | .18\*\*\* | .13\*\* | -.07 | .18\*\*\* | .29\*\*\* | .06 | .14\*\* | -.16\*\* | -.11\* | -.13\*\* | -.27\*\*\* | .01 | .16\*\* | (.77) |

*N* = 448. Reliability coefficients are displayed on the diagonal in parentheses.

Ϯ*p* < .10, \**p* < .05, \*\**p* < .01, \*\*\**p* < .001 (two-tailed).

**Exploratory Factor Analyses for the US and UK Samples**

Table A8

*Results from Exploratory Factor Analysis for the US Sample*

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| No. | Item | Factor | | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 1 | Sympathy 4 | **.89** | .04 | .05 | -.17 | .19 | -.08 | .11 | .06 | -.05 | .07 |
| 2 | Sympathy 1 | **.88** | -.03 | .06 | -.21 | .10 | -.13 | .03 | .13 | -.03 | .17 |
| 3 | Sympathy 2 | **.87** | .01 | .08 | -.19 | .18 | -.09 | .01 | .08 | -.07 | .18 |
| 4 | Sympathy 3 | **.86** | .05 | .04 | -.21 | .16 | -.09 | .13 | .10 | -.04 | .16 |
| 5 | Prosocial 1 | **.56** | .15 | .03 | -.32 | .15 | -.18 | .09 | .11 | .00 | .51 |
| 6 | Social norm 2 | .04 | **.84** | -.09 | .02 | .06 | .04 | .07 | .00 | -.04 | .03 |
| 7 | Social norm 4 | .02 | **.81** | -.07 | .05 | .05 | .05 | .03 | .07 | .08 | -.03 |
| 8 | Social norm 3 | -.04 | **.80** | -.04 | .03 | .11 | .05 | .20 | -.12 | .17 | -.03 |
| 9 | Social norm 1 | .02 | **.79** | -.02 | .02 | .03 | -.01 | .29 | -.06 | .07 | .09 |
| 10 | Social norm 6 | .14 | **.78** | .11 | .05 | -.02 | -.01 | .25 | -.05 | -.01 | .04 |
| 11 | Social norm 5 | -.03 | **.77** | -.07 | -.01 | .04 | .00 | .13 | -.11 | .24 | .03 |
| 12 | Optimism 7R | -.01 | -.07 | **.89** | -.13 | .21 | .01 | .03 | .01 | -.17 | .06 |
| 13 | Optimism 6R | .08 | -.06 | **.87** | -.13 | .30 | .05 | .03 | .03 | -.11 | .01 |
| 14 | Optimism 5R | .09 | -.08 | **.86** | -.13 | .20 | .05 | .05 | .07 | -.16 | .07 |
| 15 | Optimism 8R | .13 | -.01 | **.86** | -.16 | .34 | .02 | .02 | -.02 | -.10 | .02 |
| 16 | Selfishness 6 | -.24 | -.04 | -.06 | **.78** | -.03 | .03 | .10 | .06 | .08 | .01 |
| 17 | Selfishness 3 | -.24 | .02 | -.11 | **.72** | -.03 | .05 | .15 | .19 | .14 | -.14 |
| 18 | Selfishness 5 | -.14 | .31 | -.02 | **.67** | -.14 | .14 | -.18 | .05 | -.06 | -.18 |
| 19 | Selfishness 4 | -.10 | .08 | -.29 | **.66** | .09 | .04 | .01 | -.02 | .04 | -.20 |
| 20 | Selfishness 2 | -.28 | -.03 | -.08 | **.55** | -.12 | .08 | -.24 | -.04 | .00 | -.24 |
| 21 | Selfishness 8 | -.49 | -.10 | -.24 | **.54** | -.00 | .07 | .09 | .07 | .13 | .17 |
| 22 | Selfishness 7 | -.46 | .04 | -.07 | **.51** | .09 | .14 | -.08 | -.20 | .06 | -.28 |
| 23 | Optimism 3 | .13 | .06 | .23 | -.03 | **.87** | .11 | .12 | .00 | -.03 | .04 |
| 24 | Optimism 4 | .17 | .08 | .19 | -.03 | **.80** | .12 | .01 | .03 | -.04 | .16 |
| 25 | Optimism 1 | .09 | .04 | .26 | -.03 | **.79** | .09 | -.02 | -.04 | -.02 | -.03 |
| 26 | Optimism 2 | .24 | .10 | .24 | -.02 | **.78** | .04 | .10 | .07 | -.10 | .02 |
| 27 | Vulnerability 2 | -.17 | .02 | .03 | .02 | .09 | **.86** | .09 | .02 | -.03 | .06 |
| 28 | Vulnerability 4 | -.06 | .03 | -.02 | .05 | .09 | **.86** | -.07 | -.02 | .10 | -.17 |
| 29 | Vulnerability 3 | -.06 | .03 | .05 | .13 | .04 | **.85** | -.06 | -.01 | .04 | -.14 |
| 30 | Vulnerability 1 | -.12 | .04 | .04 | .09 | .10 | **.84** | -.01 | -.04 | .00 | .07 |
| 31 | Government order 2 | .04 | .34 | .04 | .04 | .09 | -.03 | **.89** | -.01 | -.01 | -.01 |
| 32 | Government order 1 | .06 | .36 | .05 | .01 | .02 | .02 | **.87** | -.03 | .02 | .03 |
| 33 | Government order 3 | .12 | .33 | .02 | -.03 | .13 | -.05 | **.85** | -.03 | .04 | .03 |
| 34 | Freedom 3 | .13 | -.06 | -.07 | -.01 | .05 | -.02 | .01 | **.88** | .09 | -.03 |
| 35 | Freedom 2 | .06 | .00 | .06 | .01 | -.08 | .03 | .01 | **.84** | -.03 | .16 |
| 36 | Freedom 1 | .11 | -.10 | .04 | .00 | .02 | -.00 | .10 | **.83** | .13 | -.06 |
| 37 | Freedom 4 | .05 | -.04 | .03 | .13 | .05 | -.05 | -.21 | **.66** | -.01 | .09 |
| 38 | Boredom 1 | -.08 | .16 | -.09 | .04 | .03 | .09 | -.04 | .06 | **.88** | -.02 |
| 39 | Boredom 3 | -.11 | .17 | -.17 | .10 | -.09 | .06 | .04 | .09 | **.85** | .03 |
| 40 | Boredom 2 | .02 | .11 | -.20 | .08 | -.12 | -.04 | .04 | .05 | **.82** | .02 |
| 41 | Prosocial 4 | .49 | .07 | .00 | -.28 | .19 | -.05 | -.04 | .05 | .03 | **.71** |
| 42 | Prosocial 3 | .51 | .03 | .11 | -.27 | .12 | -.08 | -.05 | .14 | .03 | **.66** |
| 43 | Prosocial 2 | .54 | .06 | .08 | -.29 | .07 | -.11 | .07 | .11 | .02 | **.66** |
| 44 | Selfishness 1 | -.23 | -.02 | -.36 | .27 | .22 | .08 | -.36 | .04 | .03 | **-.43** |
| Eigenvalues |  | 10.03 | 5.84 | 4.75 | 3.25 | 2.50 | 1.99 | 1.78 | 1.61 | 1.11 | 1.01 |

*Note.* *N* = 199. Factor loadings in bold exceed .40 in absolute value. Prosocial = prosocial motivation, Freedom = desire for freedom, Social norm = compliance with social norm, Government order = compliance with government order, and Vulnerability = perceived vulnerability of catching Covid-19. “R” represents the reverse-coded item.

Table A9

*Results from Exploratory Factor Analysis for the UK Sample*

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| No. | Item | Factor | | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 1 | Prosocial 2 | **.86** | -.01 | -.01 | -.17 | .06 | .05 | .08 | .04 | .08 | -.19 |
| 2 | Prosocial 3 | **.82** | .06 | -.04 | -.00 | .05 | .14 | .02 | .08 | .12 | -.20 |
| 3 | Sympathy 2 | **.80** | .05 | .09 | -.34 | -.08 | .05 | -.05 | .06 | -.07 | .01 |
| 4 | Prosocial 1 | **.80** | .03 | .01 | .06 | .09 | .05 | -.06 | -.01 | .04 | -.20 |
| 5 | Prosocial 4 | **.79** | .06 | -.04 | -.13 | -.02 | .04 | .03 | .12 | .08 | -.28 |
| 6 | Sympathy 1 | **.78** | .06 | .03 | -.35 | -.08 | .03 | .08 | .11 | -.04 | .12 |
| 7 | Sympathy 3 | **.77** | .11 | .01 | -.32 | -.05 | -.11 | .04 | -.04 | .08 | .16 |
| 8 | Sympathy 4 | **.66** | .15 | -.03 | -.39 | -.03 | -.09 | .07 | -.04 | .11 | .08 |
| 9 | Social norm 4 | .09 | **.80** | .01 | .01 | -.05 | .12 | -.02 | .09 | .06 | -.07 |
| 10 | Social norm 3 | .07 | **.79** | .00 | .08 | -.05 | .07 | .01 | -.07 | .01 | .02 |
| 11 | Social norm 6 | .04 | **.79** | .03 | -.10 | -.05 | .22 | .03 | -.07 | -.02 | .01 |
| 12 | Social norm 2 | .09 | **.78** | -.00 | -.11 | -.05 | .01 | -.13 | .05 | .08 | -.05 |
| 13 | Social norm 5 | -.03 | **.76** | -.16 | .06 | .06 | .18 | .09 | -.13 | .02 | -.03 |
| 14 | Social norm 1 | .10 | **.76** | .02 | .05 | -.04 | .32 | -.00 | -.08 | .12 | -.09 |
| 15 | Optimism 7R | .02 | -.06 | **.89** | -.03 | .05 | .03 | -.15 | .00 | .18 | -.09 |
| 16 | Optimism 6R | -.05 | -.01 | **.88** | -.00 | .08 | -.04 | -.12 | .01 | .20 | .03 |
| 17 | Optimism 5R | -.04 | -.00 | **.87** | .04 | .02 | -.01 | -.20 | -.04 | .06 | -.10 |
| 18 | Optimism 8R | .08 | -.04 | **.81** | -.10 | .06 | -.06 | -.14 | -.04 | .29 | -.02 |
| 19 | Selfishness 6 | -.28 | -.08 | .07 | **.72** | .05 | -.05 | .01 | .12 | .05 | .08 |
| 20 | Selfishness 8 | -.32 | -.03 | -.02 | **.68** | .05 | .00 | .11 | .11 | -.10 | .04 |
| 21 | Selfishness 3 | -.22 | .04 | .01 | **.63** | .01 | .17 | .02 | .04 | -.04 | .37 |
| 22 | Selfishness 7 | -.51 | -.04 | -.07 | **.60** | .05 | -.01 | .01 | -.13 | .05 | .12 |
| 23 | Selfishness 4 | -.13 | .11 | -.07 | **.60** | .06 | -.12 | -.02 | .02 | -.04 | .14 |
| 24 | Vulnerability 2 | -.02 | -.00 | .03 | .05 | **.86** | -.04 | .06 | .05 | .03 | -.01 |
| 25 | Vulnerability 1 | -.00 | -.08 | .06 | .02 | **.84** | .08 | .08 | -.01 | .02 | .06 |
| 26 | Vulnerability 4 | .01 | -.01 | -.02 | .07 | **.82** | -.11 | .03 | .00 | .14 | .05 |
| 27 | Vulnerability 3 | .00 | -.08 | .11 | .05 | **.76** | -.19 | .04 | .02 | .08 | .09 |
| 28 | Government order 1 | .05 | .32 | -.03 | -.02 | -.06 | **.86** | .01 | -.06 | .05 | .01 |
| 29 | Government order 2 | .06 | .35 | -.03 | -.04 | -.13 | **.86** | -.05 | -.08 | .05 | .01 |
| 30 | Government order 3 | .07 | .38 | -.03 | -.04 | -.11 | **.82** | -.01 | -.07 | .12 | -.00 |
| 31 | Boredom 3 | .03 | .01 | -.19 | .03 | .07 | -.04 | **.91** | .11 | -.02 | -.02 |
| 32 | Boredom 1 | .04 | -.12 | -.18 | .01 | .08 | -.03 | **.90** | .09 | .07 | -.01 |
| 33 | Boredom 2 | .05 | .06 | -.20 | .04 | .09 | .01 | **.82** | .11 | -.03 | -.01 |
| 34 | Freedom 3 | .07 | -.07 | -.07 | .03 | .03 | -.09 | .11 | **.84** | .11 | -.05 |
| 35 | Freedom 2 | .14 | .01 | .12 | .00 | .01 | -.06 | .05 | **.83** | -.02 | .05 |
| 36 | Freedom 1 | .02 | -.16 | -.04 | .08 | .00 | .17 | .02 | **.74** | .10 | -.11 |
| 37 | Freedom 4 | .03 | .04 | -.07 | .05 | .03 | -.33 | .17 | **.57** | .08 | .08 |
| 38 | Optimism 3 | .10 | .01 | .23 | .08 | .05 | .05 | .04 | .05 | **.84** | -.02 |
| 39 | Optimism 4 | .10 | -.04 | .12 | -.03 | .10 | .06 | -.04 | .05 | **.71** | -.06 |
| 40 | Optimism 2 | .12 | .12 | .18 | -.11 | .07 | .02 | .16 | .03 | **.68** | .01 |
| 41 | Optimism 1 | -.06 | .15 | .09 | -.01 | .03 | .03 | -.11 | .12 | **.67** | .04 |
| 42 | Selfishness 2 | -.17 | -.10 | -.11 | .18 | .06 | -.03 | .06 | -.04 | -.07 | **.77** |
| 43 | Selfishness 5 | -.17 | -.08 | -.03 | .24 | .13 | .06 | -.11 | .03 | .02 | **.74** |
| 44 | Selfishness 1 | -.24 | -.03 | -.26 | .33 | .09 | -.20 | .02 | -.15 | .16 | .37 |
| Eigenvalues |  | 7.86 | 5.17 | 4.47 | 3.55 | 2.46 | 1.80 | 1.73 | 1.57 | 1.32 | 1.17 |

*Note.* *N* = 249. Factor loadings in bold exceed .40 in absolute value. Prosocial = prosocial motivation, Freedom = desire for freedom, Social norm = compliance with social norm, Government order = compliance with government order, and Vulnerability = perceived vulnerability of catching Covid-19. “R” represents the reverse-coded item.

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