

The Evolution of the COVID-19 Pandemic Through the Lens of Google Searches

Supplementary Information: Figures and
Tables

Contents

S1	Search terms queried for analysis	S2
S2	Determining language with most Google search activity in each country	S3
S3	Create consistent time-series of Google search interest	S7
S4	Correlation and lag between search interest and COVID-19 cases	S8
S5	Map of correlations of search interest in “Loss of Smell” and “Fever” with COVID-19 cases	S12
S6	Trends in search interest for “Loss of Smell” and COVID-19 cases for all countries with available data	S13
S7	Trends in search interest for “COVID Symptoms” and COVID-19 cases for all countries with available data	S15
S8	Trends in search interest for “Coronavirus” and COVID-19 cases for all countries with available data	S17
S9	Correlation between search interest and reported COVID-19 cases by six months increments	S18
S10	Explaining correlation between search interest and COVID-19 cases: additional results	S19
S11	Comparing correlation results using reported COVID-19 cases vs excess mortality	S26
S12	Association of containment policies with search interest: event study results	S35
S13	Association of Containment Policies with Search Interest: Sensitivity Analysis Across Different Day Thresholds	S36
S13.1	30 day threshold	S36
S13.2	60 day threshold	S39
S13.3	120 day threshold	S42
S13.4	180 day threshold	S45

S1 Search terms queried for analysis

Table S1: Symptoms Search Terms: Number of countries with available Google search interest data for each search term

Search Term	N Countries
Ageusia	86
Anosmia	108
COVID Symptoms	145
COVID-19	209
Coronavirus	212
Cough	197
Fever	205
How to Treat Coronavirus	61
I Can't Smell	34
I Can't Taste	17
Loss of Smell	112
Loss of Taste	105
Pneumonia	180
Shortness of Breath	132

Table S2: Containment Policy Analysis Search Terms: Number of countries with available Google search interest data for each search term

Search Term	N Countries
Anxiety	181
Anxiety Attack	77
Boredom	120
Debt	191
Divorce	189
Emergency Pill	46
File for Unemployment	27
Insomnia	159
Lonely	184
Panic	168
Pregnancy Test	157
Social Distance	89
Social Isolation	57
Stay at Home	122
Suicide	197
Unemployment	188
Unemployment Benefits	62
Unemployment Insurance	55
Unemployment Office	38
Wedding	214

S2 Determining language with most Google search activity in each country

Table S3: Illustrative example of determining most common language for Google searches

	Fever			Doctor			Hospital		
English	French	Spanish	English	French	Spanish	English	French	Spanish	
Fever	fièvre	fiebre	doctor	médecin	doctor	hospital	hôpital	hospital	
Step 1: Query weekly search interest for each translated search term									
Week 1	10	50	5	20	80	20	100	90	100
Week 2	50	100	10	10	75	10	60	70	60
Week 3	30	60	15	15	100	15	50	20	50
Step 2: Take average values across time series									
Avg	30	70	10	15	85	15	70	60	70
Step 3: Standardize values within translated search terms so maximum value is 100									
	42.85	100	14.28	17.64	100	17.64	100	85.71	100
Step 4: Average value across languages; French is used as it has the highest value below.									
• English: $(42.85 + 17.64 + 100)/3 = 53.49$									
• French: $(100 + 100 + 85.71)/3 = 95.23$									
• Spanish: $(14.28 + 17.64 + 100)/3 = 43.97$									

Table S4: Google search activity across countries and languages

Country	Language with Highest S.A.	Language and Search Activity (S.A.)				
		Name (S.A.)	Name (S.A.)	Name (S.A.)	Name (S.A.)	Name (S.A.)
Andorra	Catalan	Catalan (100)				
United Arab Emirates	Arabic	Arabic (100)				
Afghanistan	Pashto	Pashto (75)				
Antigua & Barbuda	English	English (100)				
Anguilla	English	English (100)				
Albania	Albanian	Albanian (100)				
Armenia	Russian	Armenian (69.5)				
Angola	Portuguese	Portuguese (100)				
Argentina	Spanish	Spanish (100)				
American Samoa	English	English (99.7)				
Austria	German	German (100)				
Australia	English	English (100)				
Aruba	Dutch	Dutch (100)				
Azerbaijan	Azerbaijani	Azerbaijani (100)				
Bosnia & Herzegovina	Bosnian	Bosnian (93.4)				
Barbados	English	English (100)				
Bangladesh	Bengali	Bengali (100)				
Belgium	Dutch	German (16.6)				
Burkina Faso	French	French (100)				
Bulgaria	Bulgarian	Bulgarian (100)				
Bahrain	Arabic	Arabic (100)				
Burundi	French	French (100)				
Benin	French	French (100)				
St. Barthélemy	French	French (100)				
Bermuda	English	English (100)				
Brunei	Malay	Malay (100)				
Bolivia	Spanish	Spanish (100)				
Brazil	Portuguese	Portuguese (100)				
Bahamas	English	English (100)				
Botswana	English	English (100)				
Belarus	Russian	Belarusian (15.4)				
Belize	English	English (100)				
Canada	English	English (100)				
Congo - Kinshasa	French	French (100)				
Central African Republic	French	French (100)				
Congo - Brazzaville	French	French (100)				
Switzerland	German	German (86.7)				
Côte d'Ivoire	French	French (100)				
Cook Islands	English	English (100)				
Chile	Spanish	Spanish (100)				
Cameroon	English	English (97.9)				
China	Chinese	Chinese (100)				

Colombia	Spanish	Spanish (100)		
Costa Rica	Spanish	Spanish (100)		
Cuba	Spanish	Spanish (100)		
Cape Verde	Portuguese	Portuguese (100)		
Curaçao	English	English (88.9)	Dutch (67.4)	Punjabi (0)
Cyprus	Turkish	Greek (36)	Armenian (0)	Turkish (94.5)
Czechia	Czech	Czech (100)	Slovak (0.7)	
Germany	German	German (100)		
Djibouti	French	Arabic (2.5)	French (100)	Somali (0)
Denmark	Danish	Danish (100)		
Dominica	English	English (100)		
Dominican Republic	Spanish	Spanish (100)		
Algeria	Arabic	Arabic (100)		
Ecuador	Spanish	Spanish (100)		
Estonia	Estonian	Estonian (100)		
Egypt	Arabic	Arabic (100)		
Eritrea	English	Arabic (0)		
Spain	Spanish	Catalan (46.6)	English (100)	Basque (0.3)
Ethiopia	Amharic	Amharic (100)	Spanish (85.8)	Galician (47.5)
Finland	Finnish	Finnish (100)		
Fiji	English	English (100)	Swedish (13.5)	
Falkland Islands	English	English (100)	Hindi (0)	Urdu (0)
Micronesia	English	English (100)		
France	French	French (100)		
Gabon	French	French (100)		
United Kingdom	English	English (100)		
Grenada	English	English (100)		
Georgia	Georgian	Georgian (100)		
French Guiana	French	French (100)		
Guernsey	English	English (100)	French (28.6)	
Ghana	English	English (100)		
Gibraltar	English	English (100)		
Greenland	Danish	Danish (100)		
Gambia	English	English (100)		
Guinea	French	French (100)		
Guadeloupe	French	French (100)		
Equatorial Guinea	Spanish	Spanish (85.7)	French (25.9)	
Greece	Greek	Greek (100)		
Guatemala	Spanish	Spanish (100)	Spanish (28.6)	
Guam	English	English (100)		
Guinea-Bissau	Portuguese	Portuguese (100)		
Guyana	English	English (100)		
Hong Kong SAR China	English	English (83.9)	Chinese (49.3)	
Honduras	Spanish	Spanish (100)		
Croatia	Croatian	Croatian (100)		
Haiti	French	French (86.3)	Haitian Creole (34)	
Hungary	Hungarian	Hungarian (100)		
Indonesia	Indonesian	Indonesian (100)		
Ireland	English	English (100)		
Israel	Hebrew	Arabic (44.9)	Irish (0.5)	
Isle of Man	English	English (100)	Hebrew (57.1)	
India	English	English (100)		
Iraq	Arabic	Arabic (100)	Hindi (5.7)	
Iran	Persian	Persian (100)	Kurdish (0.9)	
Iceland	Icelandic	Icelandic (100)		
Italy	Italian	Italian (100)		
Jersey	English	English (100)	French (28.6)	
Jamaica	English	English (100)		
Jordan	Arabic	Arabic (100)		
Japan	Japanese	Japanese (100)		
Kenya	English	English (100)		
Kyrgyzstan	Russian	Kyrgyz (35.8)	Swahili (5.6)	
Cambodia	Khmer	Khmer (100)	Russian (100)	
Kiribati	English	English (100)		
Comoros	French	Arabic (0)		
St. Kitts & Nevis	English	English (100)	French (100)	
North Korea	Korean	Korean (100)		
South Korea	Korean	Korean (100)		
Kuwait	Arabic	Arabic (100)		
Cayman Islands	English	English (100)		
Kazakhstan	Russian	Kazakh (21.4)	Russian (100)	
Laos	Lao	Lao (100)		
Lebanon	Arabic	Arabic (85.3)	French (41.2)	
St. Lucia	English	English (100)		
Liechtenstein	German	German (100)		
Sri Lanka	Sinhala	Sinhala (83.3)	Tamil (42.7)	
Liberia	English	English (100)		
Lesotho	English	English (100)	Sesotho (1.7)	
Lithuania	Lithuanian	Lithuanian (100)		
Luxembourg	German	German (85.1)	French (66.8)	Luxembourgish (24.9)
Latvia	Latvian	Latvian (100)		

Libya	Arabic	Arabic (100)			
Morocco	Arabic	Arabic (100)			
Monaco	French	French (100)			
Moldova	Romanian	Romanian (100)			
Montenegro	Bosnian	Bosnian (85.7)	Croatian (73.9)	Albanian (14.5)	Serbian (1)
St. Martin (French)	English	English (100)	French (33.3)	Dutch (16.7)	
Madagascar	French	French (88.3)	Malagasy (51.3)		
Marshall Islands	English	English (100)			
North Macedonia	Macedonian	Macedonian (100)			
Mali	French	French (100)			
Myanmar (Burma)	Myanmar	Myanmar (100)			
Mongolia	Mongolian	Mongolian (100)			
Macao SAR China	Chinese	Portuguese (18.8)	Chinese (99.3)		
Northern Mariana Islands	English	English (100)			
Martinique	French	French (100)			
Mauritania	Arabic	Arabic (100)			
Montserrat	English	English (100)			
Malta	English	English (100)	Maltese (1.3)		
Mauritius	English	English (100)			
Maldives	English	Arabic (0.1)	English (100)		
Malawi	English	English (100)	Nyanja (0)		
Mexico	Spanish	Spanish (100)			
Malaysia	Malay	Malay (100)			
Mozambique	Portuguese	Portuguese (100)			
Namibia	English	Afrikaans (18.3)	English (100)		
New Caledonia	French	French (100)			
Niger	French	French (100)			
Nigeria	English	English (100)			
Nicaragua	Spanish	Spanish (100)			
Netherlands	Dutch	Dutch (100)			
Norway	Norwegian	Norwegian (100)			
Nepal	Nepali	Nepali (100)			
Nauru	English	English (100)			
Niue	English	English (100)			
New Zealand	English	English (100)	Maori (3.3)		
Oman	Arabic	Arabic (100)			
Panama	Spanish	Spanish (100)			
Peru	Spanish	Spanish (100)			
French Polynesia	French	French (100)			
Papua New Guinea	English	English (100)			
Philippines	English	English (100)			
Pakistan	English	English (100)			
Poland	Polish	Polish (100)	Urdu (1)		
St. Pierre & Miquelon	French	French (100)			
Pitcairn Islands	English	English (100)			
Puerto Rico	English	English (84.1)	Spanish (79.7)		
Palestinian Territories	Arabic	Arabic (100)			
Portugal	Portuguese	Portuguese (100)			
Palau	English	English (100)			
Paraguay	Spanish	Spanish (100)			
Qatar	Arabic	Arabic (100)			
Réunion	French	French (100)			
Romania	Romanian	Romanian (100)			
Serbia	Serbian	Serbian (100)			
Russia	Russian	Russian (100)			
Rwanda	English	English (100)	French (29.9)	Kinyarwanda (17.3)	
Saudi Arabia	Arabic	Arabic (100)			
Solomon Islands	English	English (100)			
Seychelles	English	English (100)			
Sudan	Arabic	Arabic (76.1)	French (28.6)		
Sweden	Swedish	Swedish (100)	English (68.4)		
Singapore	English	English (100)			
St. Helena	English	English (100)	Malay (15.8)	Tamil (0)	Chinese (7)
Slovenia	Slovenian	Slovenian (100)			
Slovakia	Slovak	Slovak (100)			
Sierra Leone	English	English (100)			
San Marino	Italian	Italian (100)			
Senegal	French	French (100)			
Somalia	English	Arabic (4.8)	English (100)	Somali (1.3)	
Suriname	Dutch	Dutch (100)			
South Sudan	English	English (100)			
São Tomé & Príncipe	Portuguese	Portuguese (100)			
El Salvador	Spanish	Spanish (100)			
Sint Maarten	English	English (100)	Dutch (14.3)		
Syria	Arabic	Arabic (100)			
Eswatini	English	English (100)			
Turks & Caicos Islands	English	English (100)			
Chad	French	Arabic (0.8)	French (100)		
Togo	French	French (100)			
Thailand	Thai	Thai (100)			
Tajikistan	Russian	Russian (100)	Tajik (20.5)		

Tokelau	English	English (100)			
Timor-Leste	Portuguese	Portuguese (100)			
Turkmenistan	Russian	Russian (99.6)	Turkmen (29.9)		
Tunisia	Arabic	Arabic (100)			
Tonga	English	English (100)			
Turkey	Turkish	Turkish (100)			
Trinidad & Tobago	English	English (100)			
Tuvalu	English	English (100)			
Taiwan	Chinese	Chinese (100)	Swahili (22.3)		
Tanzania	English	English (100)			
Ukraine	Ukrainian	Ukrainian (100)			
Uganda	English	English (100)	Swahili (0.3)		
United States	English	English (100)			
Uruguay	Spanish	Spanish (100)			
Uzbekistan	Russian	Russian (87.9)	Uzbek (44.2)		
St. Vincent & Grenadines	English	English (100)			
Venezuela	Spanish	Spanish (100)			
British Virgin Islands	English	English (100)			
U.S. Virgin Islands	English	English (100)			
Vietnam	Vietnamese	Vietnamese (100)			
Vanuatu	English	English (100)	French (28.6)		
Wallis & Futuna	French	French (100)			
Samoa	English	English (100)	Samoan (0.5)		
Yemen	Arabic	Arabic (100)			
Mayotte	French	French (100)			
South Africa	English	Afrikaans (17.6)	English (100)	Sesotho (0.2)	Xhosa (0)
Zambia	English	English (100)			
Zimbabwe	English	English (100)	Shona (0.5)		Zulu (0.1)

S3 Create consistent time-series of Google search interest

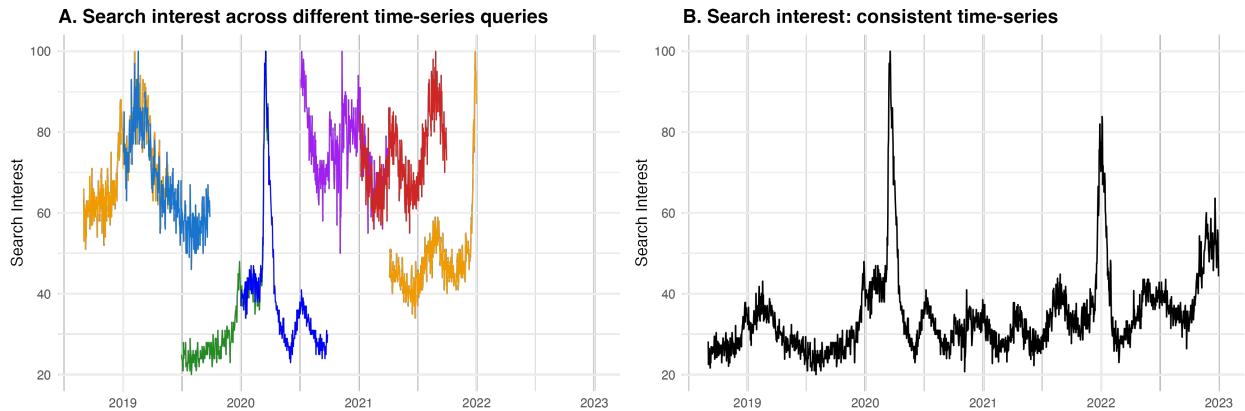


Figure S1: Creating a consistent time series of google search interest for search interest in “fever” for the United States. **Panel A** shows the raw search interest values across queries for search interest across different date ranges. Each query is scaled so its maximum value is 100. **Panel B** shows a consistent time series, creating from scaling values

S4 Correlation and lag between search interest and COVID-19 cases

Table S5: Correlation between search interest and COVID-19 cases using data in 2020

Term	Percentile							N
	Min	5th	25th	50th	75th	95th	Max	
Correlation								
Ageusia	-0.17	-0.08	-0.02	0.03	0.1	0.24	0.32	78
I Can't Taste	-0.1	-0.05	-0.01	0.06	0.12	0.31	0.6	15
How to Treat Coronavirus	-0.29	-0.2	-0.06	-0.02	0.09	0.23	0.34	42
Anosmia	-0.08	-0.04	0	0.06	0.14	0.28	0.43	98
Shortness of Breath	-0.25	-0.1	-0.03	0.02	0.07	0.19	0.33	128
I Can't Smell	-0.07	-0.06	-0.01	0.08	0.16	0.32	0.42	33
Cough	-0.46	-0.24	-0.07	-0.01	0.05	0.17	0.36	188
Pneumonia	-0.37	-0.18	-0.05	-0.02	0.06	0.33	0.63	173
Fever	-0.46	-0.28	-0.06	-0.01	0.06	0.18	0.41	197
Loss of Taste	-0.05	-0.04	0.05	0.13	0.25	0.6	0.83	99
Loss of Smell	-0.06	-0.04	0.06	0.17	0.33	0.64	0.81	104
Covid-19	-0.3	-0.13	-0.03	0.02	0.11	0.26	0.7	205
Coronavirus	-0.49	-0.39	-0.24	-0.12	-0.03	0.16	0.59	207
Covid Symptoms	-0.08	-0.04	0.02	0.11	0.3	0.62	0.72	136
Correlation using best lag								
Ageusia	-0.12	-0.05	0.02	0.12	0.2	0.35	0.53	78
I Can't Taste	-0.06	0.01	0.08	0.1	0.2	0.35	0.6	15
How to Treat Coronavirus	-0.22	-0.16	-0.03	0.05	0.23	0.4	0.51	42
Anosmia	-0.05	-0.02	0.07	0.16	0.24	0.43	0.52	98
Shortness of Breath	-0.15	-0.05	0.03	0.1	0.16	0.31	0.49	128
I Can't Smell	-0.06	-0.04	0.06	0.13	0.26	0.41	0.55	33
Cough	-0.41	-0.19	-0.03	0.06	0.13	0.29	0.45	188
Pneumonia	-0.35	-0.13	-0.01	0.08	0.19	0.4	0.74	173
Fever	-0.37	-0.2	0	0.08	0.17	0.33	0.73	197
Loss of Taste	-0.04	-0.01	0.11	0.25	0.37	0.66	0.86	99
Loss of Smell	-0.06	-0.02	0.17	0.28	0.43	0.68	0.88	104
Covid-19	-0.26	-0.06	0.04	0.15	0.22	0.47	0.75	205
Coronavirus	-0.47	-0.35	-0.17	-0.05	0.07	0.39	0.76	207
Covid Symptoms	-0.06	-0.01	0.14	0.24	0.41	0.69	0.9	136
Lag with best correlation								
Ageusia	-21	-21	-17.75	-10.5	5	21	21	78
I Can't Taste	-21	-20.3	-18.5	-16	0	20.3	21	15
How to Treat Coronavirus	-21	-20.95	-19	-16	-10	0.9	13	42
Anosmia	-21	-21	-17	-11	-4.25	18.3	21	98
Shortness of Breath	-21	-20	-16	-6	7.25	17	21	128
I Can't Smell	-20	-20	-16	-8	2	18.4	21	33
Cough	-21	-21	-14.25	-6.5	4.25	20	21	188
Pneumonia	-21	-21	-15	-6	6	19	21	173
Fever	-21	-21	-16	-7	4	19.2	21	197
Loss of Taste	-21	-21	-18	-11	-3.5	13.4	20	99
Loss of Smell	-21	-21	-18.25	-11	-2	16.85	21	104
Covid-19	-21	-21	-18	-11	-4	13.8	21	205
Coronavirus	-21	-21	-21	-16	-9	3	21	207
Covid Symptoms	-21	-21	-17	-10.5	-3.75	13.25	20	136

Table S6: Correlation between search interest and COVID-19 cases using data in 2021

Term	Percentile							N
	Min	5th	25th	50th	75th	95th	Max	
Correlation								
Ageusia	-0.22	-0.09	-0.03	0.02	0.09	0.19	0.34	76
I Can't Taste	-0.06	-0.05	-0.01	0.07	0.15	0.26	0.26	17
How to Treat Coronavirus	-0.21	-0.16	-0.05	0.08	0.17	0.29	0.32	58
Anosmia	-0.11	-0.06	0	0.04	0.13	0.26	0.52	100
Shortness of Breath	-0.15	-0.07	-0.02	0.04	0.12	0.36	0.87	123
I Can't Smell	-0.19	-0.11	-0.01	0.03	0.09	0.25	0.55	31
Cough	-0.47	-0.08	-0.01	0.06	0.15	0.39	0.9	188
Pneumonia	-0.19	-0.07	-0.01	0.05	0.15	0.44	0.94	168
Fever	-0.18	-0.07	-0.01	0.05	0.14	0.51	0.88	201
Loss of Taste	-0.15	-0.05	0.02	0.09	0.17	0.43	0.82	99
Loss of Smell	-0.05	-0.03	0.03	0.09	0.2	0.47	0.86	104
Covid-19	-0.16	-0.06	0	0.07	0.18	0.4	0.65	202
Coronavirus	-0.28	-0.1	-0.01	0.05	0.24	0.56	0.81	211
Covid Symptoms	-0.11	-0.05	0.04	0.13	0.29	0.67	0.94	138
Correlation using best lag								
Ageusia	-0.17	-0.01	0.03	0.1	0.18	0.36	0.48	76
I Can't Taste	0	0.01	0.09	0.14	0.24	0.29	0.39	17
How to Treat Coronavirus	-0.18	-0.14	0.04	0.14	0.27	0.34	0.51	58
Anosmia	-0.09	-0.03	0.08	0.13	0.22	0.34	0.56	100
Shortness of Breath	-0.09	-0.03	0.07	0.13	0.21	0.43	0.88	123
I Can't Smell	-0.1	-0.06	0.1	0.13	0.18	0.29	0.71	31
Cough	-0.38	-0.03	0.08	0.15	0.24	0.53	0.92	188
Pneumonia	-0.16	-0.01	0.08	0.16	0.25	0.57	0.95	168
Fever	-0.16	-0.01	0.09	0.14	0.24	0.62	0.91	201
Loss of Taste	-0.07	0	0.1	0.16	0.25	0.51	0.9	99
Loss of Smell	-0.02	0.02	0.11	0.2	0.28	0.56	0.94	104
Covid-19	-0.08	-0.01	0.1	0.17	0.29	0.51	0.76	202
Coronavirus	-0.21	-0.03	0.09	0.18	0.33	0.61	0.87	211
Covid Symptoms	-0.09	0.02	0.17	0.24	0.4	0.74	0.98	138
Lag with best correlation								
Ageusia	-21	-21	-15.25	0	17.25	21	21	76
I Can't Taste	-21	-19.4	-16	-9	3	17	21	17
How to Treat Coronavirus	-21	-21	-17.75	-11	2	20.15	21	58
Anosmia	-21	-21	-16	-4	12	20	21	100
Shortness of Breath	-21	-20	-10	1	13	20	21	123
I Can't Smell	-21	-21	-17.5	-5	12.5	21	21	31
Cough	-21	-21	-13	-4	3	19	21	188
Pneumonia	-21	-19	-11	-2	10	21	21	168
Fever	-21	-20	-12	-3	7	20	21	201
Loss of Taste	-21	-20	-11	-3	8.5	19.1	21	99
Loss of Smell	-21	-20	-14	-6	3	16.85	21	104
Covid-19	-21	-19	-12	-2	7	19.95	21	202
Coronavirus	-21	-20	-9	-1	10	20.5	21	211
Covid Symptoms	-21	-17	-10.75	-4	1.75	18.15	21	138

Table S7: Correlation between search interest and COVID-19 cases using data in 2022

Term	Percentile							
	Min	5th	25th	50th	75th	95th	Max	N
Correlation								
Ageusia	-0.11	-0.09	-0.04	0.02	0.07	0.15	0.28	62
I Can't Taste	-0.11	-0.11	-0.01	0.02	0.06	0.23	0.39	14
How to Treat Coronavirus	-0.13	-0.04	0	0.04	0.11	0.16	0.26	48
Anosmia	-0.1	-0.07	-0.02	0.03	0.11	0.26	0.49	89
Shortness of Breath	-0.14	-0.08	-0.03	0.03	0.11	0.29	0.54	115
I Can't Smell	-0.06	-0.05	-0.02	0.02	0.07	0.34	0.42	23
Cough	-0.29	-0.08	-0.01	0.05	0.13	0.47	0.77	187
Pneumonia	-0.21	-0.09	-0.03	0.02	0.09	0.26	0.55	158
Fever	-0.25	-0.08	-0.02	0.04	0.13	0.47	0.78	196
Loss of Taste	-0.1	-0.08	0	0.06	0.11	0.33	0.78	80
Loss of Smell	-0.09	-0.05	-0.01	0.03	0.12	0.4	0.72	85
Covid-19	-0.24	-0.05	0.02	0.13	0.34	0.71	0.91	198
Coronavirus	-0.2	-0.06	0.02	0.13	0.45	0.76	0.92	198
Covid Symptoms	-0.1	-0.06	0	0.1	0.27	0.74	0.86	138
Correlation using best lag								
Ageusia	-0.09	-0.03	0.04	0.09	0.16	0.26	0.3	62
I Can't Taste	-0.07	-0.02	0.04	0.1	0.16	0.27	0.43	14
How to Treat Coronavirus	0.02	0.04	0.07	0.14	0.18	0.26	0.38	48
Anosmia	-0.03	0.01	0.07	0.14	0.22	0.35	0.57	89
Shortness of Breath	-0.13	0.02	0.08	0.13	0.21	0.37	0.65	115
I Can't Smell	-0.01	0	0.09	0.13	0.18	0.41	0.43	23
Cough	-0.25	-0.03	0.08	0.15	0.26	0.61	0.88	187
Pneumonia	-0.17	-0.01	0.08	0.14	0.2	0.38	0.75	158
Fever	-0.19	0.01	0.09	0.15	0.26	0.64	0.89	196
Loss of Taste	-0.07	0	0.08	0.13	0.18	0.49	0.85	80
Loss of Smell	-0.02	0.01	0.08	0.12	0.22	0.48	0.83	85
Covid-19	-0.19	0.07	0.13	0.24	0.45	0.83	0.92	198
Coronavirus	-0.19	0.06	0.15	0.23	0.51	0.84	0.93	198
Covid Symptoms	-0.03	0.04	0.12	0.22	0.4	0.85	0.97	138
Lag with best correlation								
Ageusia	-21	-21	-13.5	0	11	20	21	62
I Can't Taste	-21	-19.05	-7.25	-4	6.5	16.75	20	14
How to Treat Coronavirus	-21	-20.65	-13.5	0	8.5	16	21	48
Anosmia	-21	-21	-13	-5	5	19.6	21	89
Shortness of Breath	-21	-20	-12	0	12	20	21	115
I Can't Smell	-21	-21	-17	-7	8	16.9	20	23
Cough	-21	-21	-15	-6	4	18	21	187
Pneumonia	-21	-21	-16	-3	11	20	21	158
Fever	-21	-20	-15	-8	4	19.25	21	196
Loss of Taste	-21	-21	-15	-6.5	5.25	18.05	21	80
Loss of Smell	-20	-18.8	-12	-3	11	18	21	85
Covid-19	-21	-19	-14	-5	5	17.15	21	198
Coronavirus	-21	-21	-15	-8	0	16	21	198
Covid Symptoms	-21	-20	-13	-5	3.75	17.15	21	138

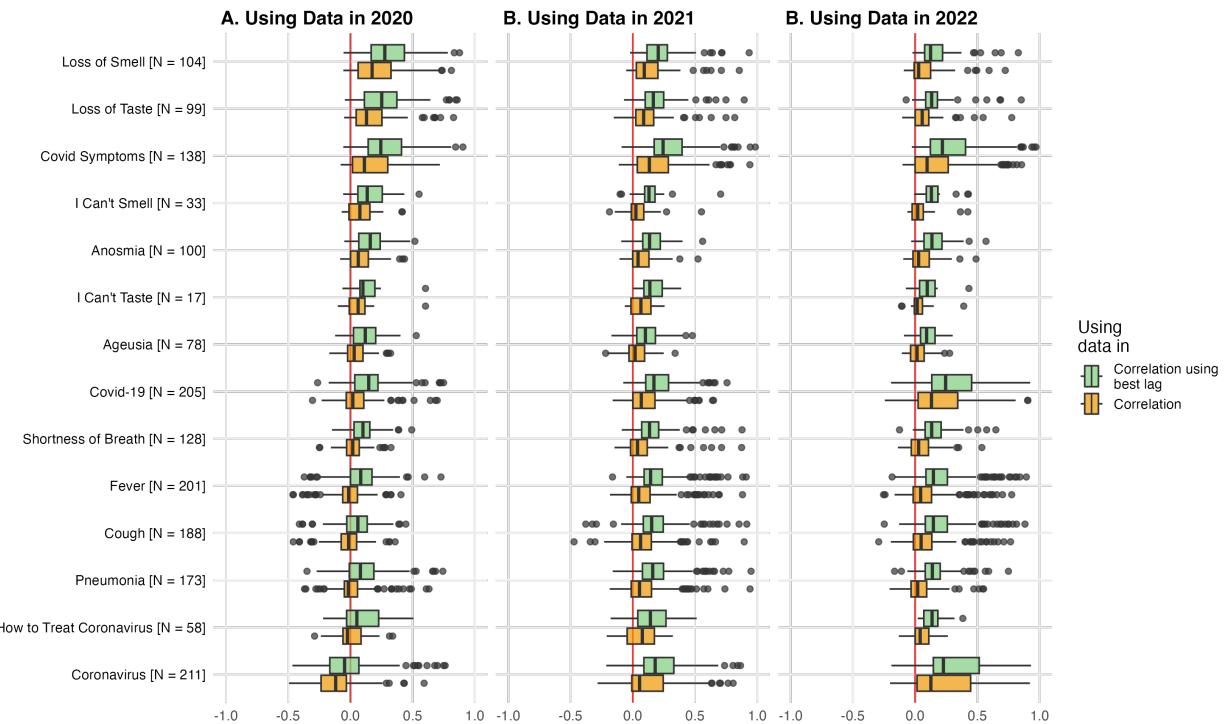


Figure S2: Distribution of correlation between search interest and COVID-19 cases using the original correlation and the correlation when using the lagged value of COVID-19 cases that produced the highest correlation. ‘N’ indicates the number of countries with available data. The boxplots include: center line, median; box limits, upper and lower quartiles; whiskers, 1.5x interquartile range; points beyond whiskers, outliers.

S5 Map of correlations of search interest in “Loss of Smell” and “Fever” with COVID-19 cases

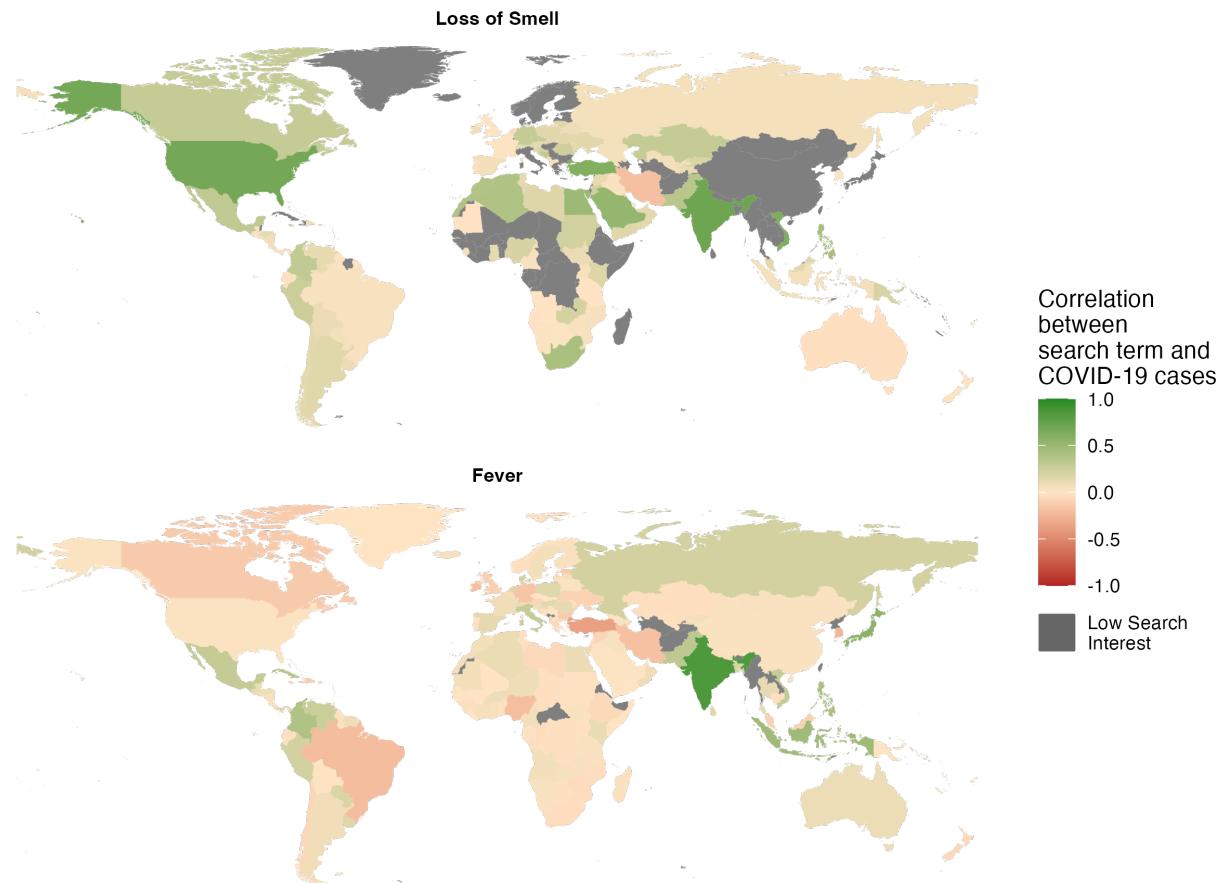


Figure S3: Correlation between reported COVID-19 cases and search interest in “Loss of Smell” and “Fever.” Maps produced using R, version 4.2.2 (<https://www.r-project.org/>); data for country boundaries come from Natural Earth (<https://www.naturalearthdata.com/>).

S6 Trends in search interest for “Loss of Smell” and COVID-19 cases for all countries with available data



Figure S4: Trends between search interest in “Loss of Smell” and COVID-19 cases for all countries with available data. To show trends more clearly, the seven-day moving average of search interest is shown.

S7 Trends in search interest for “COVID Symptoms” and COVID-19 cases for all countries with available data

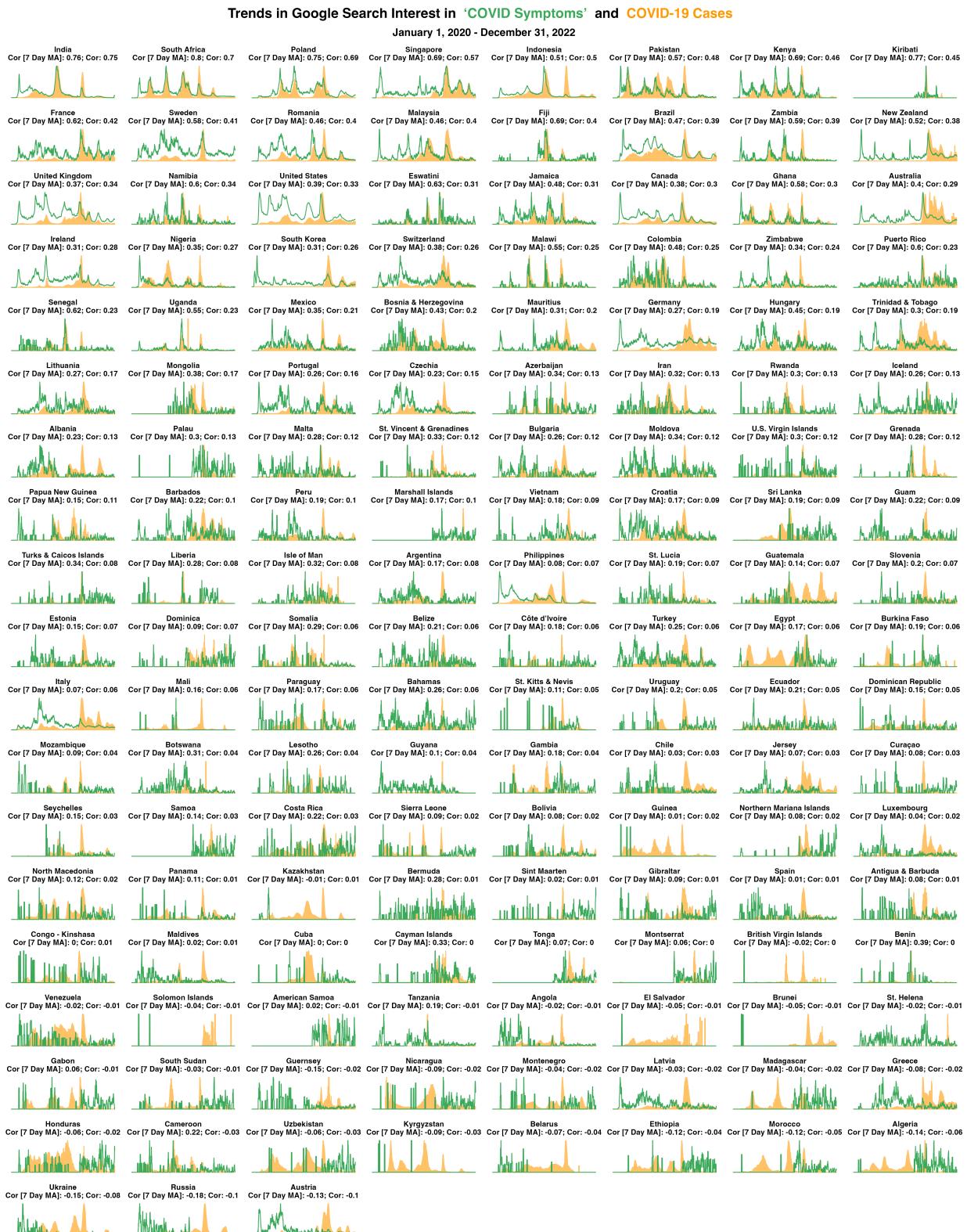


Figure S5: Trends between search interest in “COVID Symptoms” and COVID-19 cases for all countries with available data

S8 Trends in search interest for “Coronavirus” and COVID-19 cases for all countries with available data

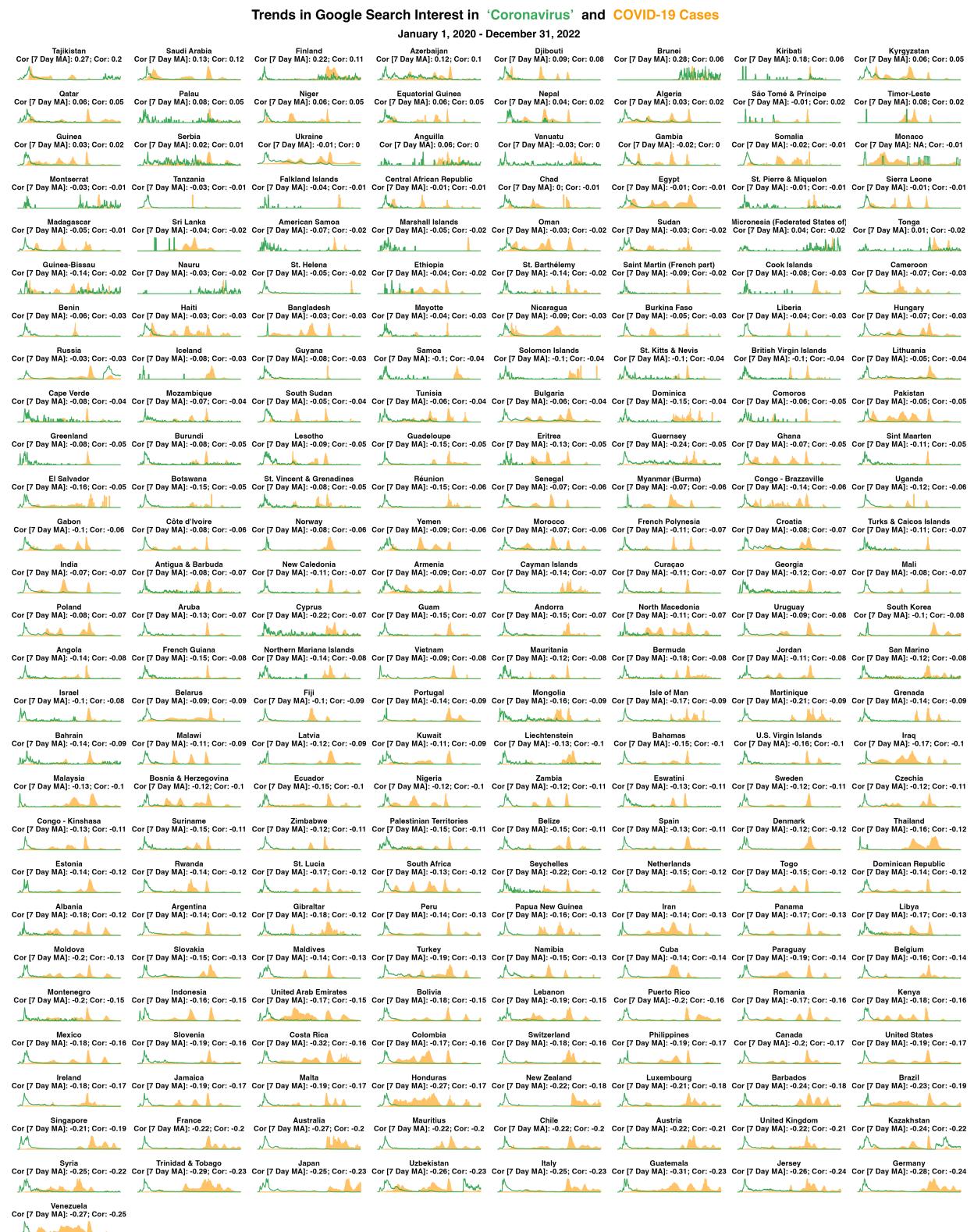


Figure S6: Trends between search interest in “COVID Symptoms” and COVID-19 cases for all countries with available data

S9 Correlation between search interest and reported COVID-19 cases by six months increments

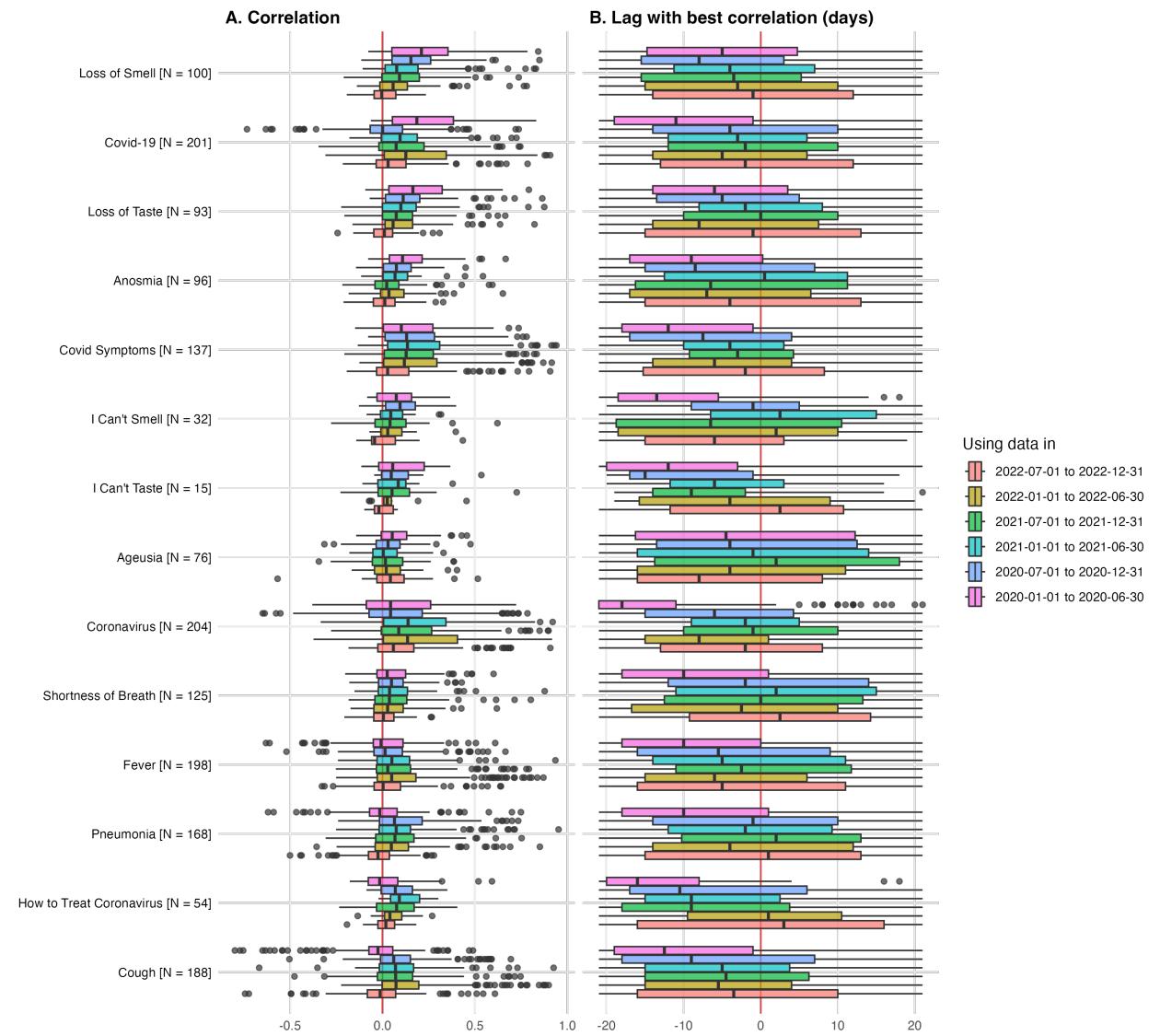


Figure S7: Search interest correlating with and anticipating COVID-19 cases. Panel A shows the correlation between search interest and COVID-19 cases. Panel B shows the lead/lag value of COVID-19 cases that produced the highest correlation with search interest. 'N' indicates the number of countries with available data. The boxplots include: center line, median; box limits, upper and lower quartiles; whiskers, 1.5x interquartile range; points beyond whiskers, outliers.

S10 Explaining correlation between search interest and COVID-19 cases: additional results

Table S8: Explaining correlation between search interest in “loss of taste” and COVID-19 cases, using data from 2020 and 2021

	<i>Dependent variable:</i>							
	Correlation							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Total COVID-19 Cases, log	0.03*** (0.01)						0.04*** (0.01)	0.04*** (0.01)
Per Pop. Using Internet		0.0005 (0.001)						-0.001 (0.001)
Mobile Cell Sub. per 100			0.0002 (0.001)					0.0002 (0.001)
GDP Per Cap, Log				0.02 (0.01)			-0.01 (0.03)	-0.003 (0.03)
Low Income					-0.07 (0.07)		0.03 (0.11)	0.03 (0.11)
Lower Middle Income					-0.03 (0.04)		0.02 (0.07)	0.02 (0.08)
Upper Middle Income					-0.02 (0.04)		0.01 (0.05)	0.02 (0.05)
Europe and Central Asia						-0.02 (0.05)	-0.02 (0.05)	-0.02 (0.05)
Latin America and Caribbean						-0.07 (0.05)	-0.04 (0.05)	-0.04 (0.05)
Middle East and North Africa						-0.10* (0.05)	-0.07 (0.05)	-0.06 (0.06)
North America							0.37*** (0.10)	0.32*** (0.10)
South Asia							0.17** (0.09)	0.15* (0.08)
Sub-Saharan Africa							-0.07 (0.05)	-0.001 (0.05)
Constant	-0.35*** (0.09)	0.09* (0.05)	0.10 (0.06)	-0.03 (0.10)	0.14*** (0.03)	0.16*** (0.04)	-0.27 (0.28)	-0.35 (0.30)
Observations	105	100	103	102	102	105	102	100
Adjusted R ²	0.20	-0.01	-0.01	0.01	-0.02	0.21	0.32	0.31

*p<0.1; **p<0.05; ***p<0.01

Table S9: Explaining the lead/lag value that produced the highest correlation between search interest in “loss of taste” and COVID-19 cases, using data from 2020 and 2021

	<i>Dependent variable:</i>							
	Best Lag							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Total COVID-19 Cases, log	-0.79 (0.51)						-1.09* (0.64)	-1.20* (0.67)
Per Pop. Using Internet	-0.03 (0.05)						0.04 (0.11)	
Mobile Cell Sub. per 100		0.01 (0.04)					0.002 (0.04)	
GDP Per Cap, Log		-0.20 (0.81)				1.74 (2.10)	0.92 (2.51)	
Low Income			7.13 (4.49)			4.01 (8.36)	4.04 (8.66)	
Lower Middle Income			-1.71 (2.54)			-1.19 (5.83)	-1.21 (5.93)	
Upper Middle Income			3.08 (2.50)			5.53 (3.87)	4.96 (4.00)	
Europe and Central Asia				-2.10 (3.48)	-3.59 (3.55)	-3.38 (3.68)		
Latin America and Caribbean				-7.52** (3.68)	-9.75** (3.81)	-9.76** (3.90)		
Middle East and North Africa				-7.22* (4.08)	-7.79* (4.06)	-8.50* (4.32)		
North America				-1.30 (7.52)	-0.98 (7.55)	-0.44 (7.89)		
South Asia				-5.63 (6.39)	-3.84 (6.41)	-3.47 (6.68)		
Sub-Saharan Africa				3.44 (3.79)	2.45 (4.28)	2.26 (4.55)		
Constant	4.40 (7.08)	-4.61 (3.17)	-8.18* (4.24)	-4.61 (7.32)	-7.29*** (1.74)	-3.70 (3.07)	-4.58 (22.22)	1.51 (23.44)
Observations	105	100	103	102	102	105	102	100
Adjusted R ²	0.01	-0.01	-0.01	-0.01	0.03	0.10	0.15	0.13

*p<0.1; **p<0.05; ***p<0.01

Table S10: Explaining correlation between search interest in “COVID symptoms” and COVID-19 cases, using data from 2020 and 2021

	<i>Dependent variable:</i>							
	Correlation							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Total COVID-19 Cases, log	0.03*** (0.01)						0.03*** (0.01)	0.03*** (0.01)
Per Pop. Using Internet		0.001 (0.001)						-0.004* (0.002)
Mobile Cell Sub. per 100			0.0005 (0.0005)					-0.0003 (0.001)
GDP Per Cap, Log				0.03** (0.01)			-0.001 (0.03)	0.04 (0.04)
Low Income					-0.10* (0.05)		-0.13 (0.13)	-0.19 (0.15)
Lower Middle Income					-0.07* (0.04)		-0.10 (0.09)	-0.13 (0.10)
Upper Middle Income					-0.05 (0.04)		-0.05 (0.06)	-0.04 (0.06)
Europe and Central Asia						0.04 (0.05)	-0.04 (0.05)	-0.03 (0.06)
Latin America and Caribbean						-0.02 (0.05)	-0.01 (0.05)	-0.03 (0.06)
Middle East and North Africa						-0.11 (0.09)	-0.11 (0.09)	-0.06 (0.09)
North America						0.20* (0.11)	0.08 (0.11)	0.13 (0.14)
South Asia						0.21** (0.10)	0.18* (0.09)	0.15 (0.10)
Sub-Saharan Africa						-0.005 (0.05)	0.09 (0.06)	0.05 (0.07)
Constant	-0.26*** (0.07)	0.11** (0.05)	0.10* (0.06)	-0.08 (0.10)	0.20*** (0.03)	0.14*** (0.04)	-0.23 (0.35)	-0.31 (0.40)
Observations	145	125	135	137	140	145	137	124
Adjusted R ²	0.18	0.01	0.0003	0.03	0.02	0.04	0.21	0.20

*p<0.1; **p<0.05; ***p<0.01

Table S11: Explaining the lead/lag value that produced the highest correlation between search interest in “COVID symptoms” and COVID-19 cases, using data from 2020 and 2021

	<i>Dependent variable:</i>								
	Best Lag								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
Total COVID-19 Cases, log	-0.44 (0.31)						-0.37 (0.38)	-0.10 (0.45)	
Per Pop. Using Internet		-0.02 (0.03)						-0.02 (0.10)	
Mobile Cell Sub. per 100			0.01 (0.02)					-0.02 (0.03)	
GDP Per Cap, Log				0.41 (0.57)			2.59 (1.79)	1.05 (2.22)	
Low Income					-0.27 (2.61)		1.98 (7.11)	-3.82 (7.64)	
Lower Middle Income						-1.31 (2.04)	1.71 (5.01)	-2.68 (5.37)	
Upper Middle Income						-2.40 (1.92)	0.59 (3.10)	-1.52 (3.28)	
Europe and Central Asia							-0.35 (2.47)	-0.24 (2.74)	-0.76 (2.97)
Latin America and Caribbean							-0.19 (2.48)	-0.29 (2.63)	-2.08 (3.00)
Middle East and North Africa							5.70 (4.51)	6.83 (4.65)	7.27 (4.77)
North America							4.63 (5.59)	1.30 (5.89)	2.27 (7.05)
South Asia							-0.70 (4.94)	2.15 (5.11)	1.24 (5.20)
Sub-Saharan Africa							3.09 (2.54)	6.87** (3.19)	6.04* (3.56)
Constant	-0.83 (3.99)	-5.35** (2.07)	-7.37*** (2.66)	10.07* (5.15)	-5.36*** (1.29)	-7.30*** (2.02)	-27.34 (19.08)	-10.99 (20.53)	
Observations	145	125	135	137	140	145	137	124	
Adjusted R ²	0.01	-0.004	-0.01	-0.004	-0.01	-0.003	0.01	-0.0005	

*p<0.1; **p<0.05; ***p<0.01

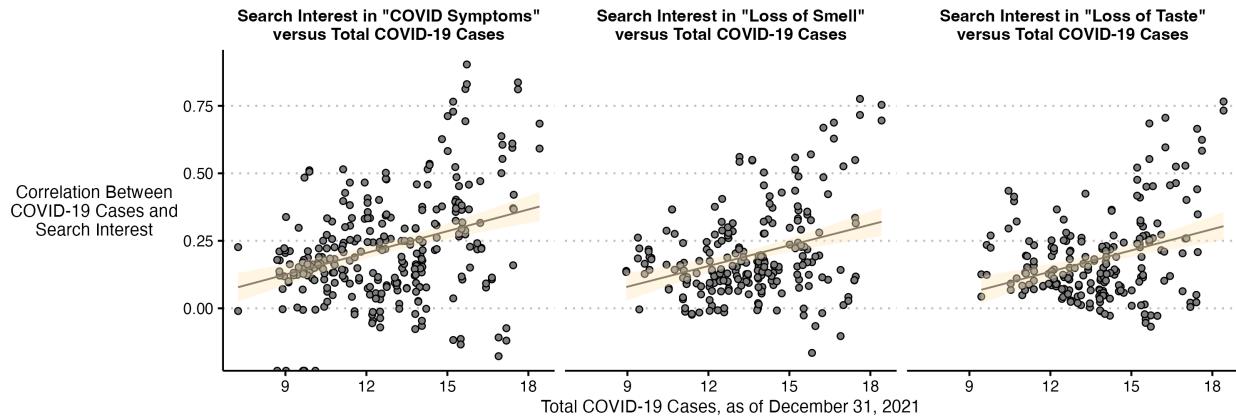


Figure S8: Scatterplots showing association between (1) correlation of search interest and COVID-19 cases and (2) total COVID-19 cases as of December 31, 2021, for search interest in “COVID Symptoms”, “Loss of Smell”, and “Loss of Taste.”

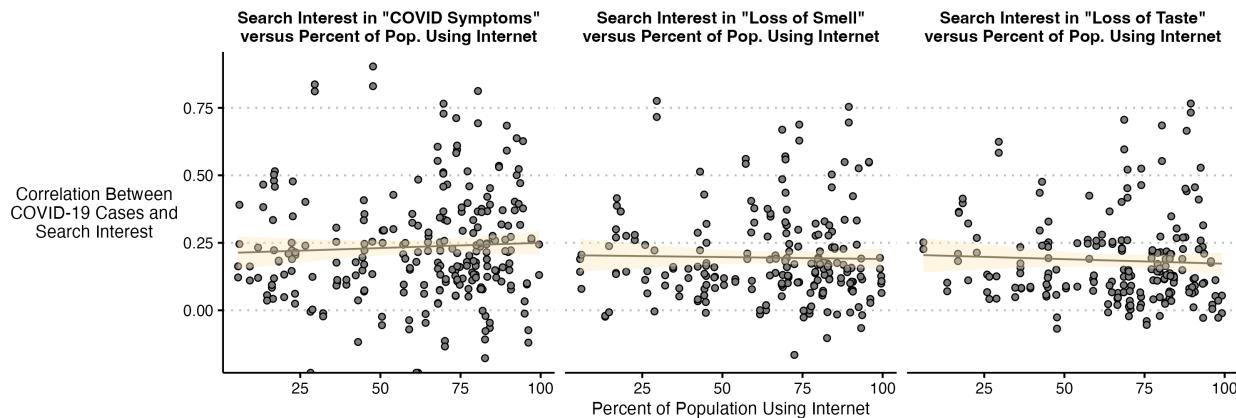


Figure S9: Scatterplots showing association between (1) correlation of search interest and COVID-19 cases and (2) percent of the population using internet, for search interest in “COVID Symptoms”, “Loss of Smell”, and “Loss of Taste.”

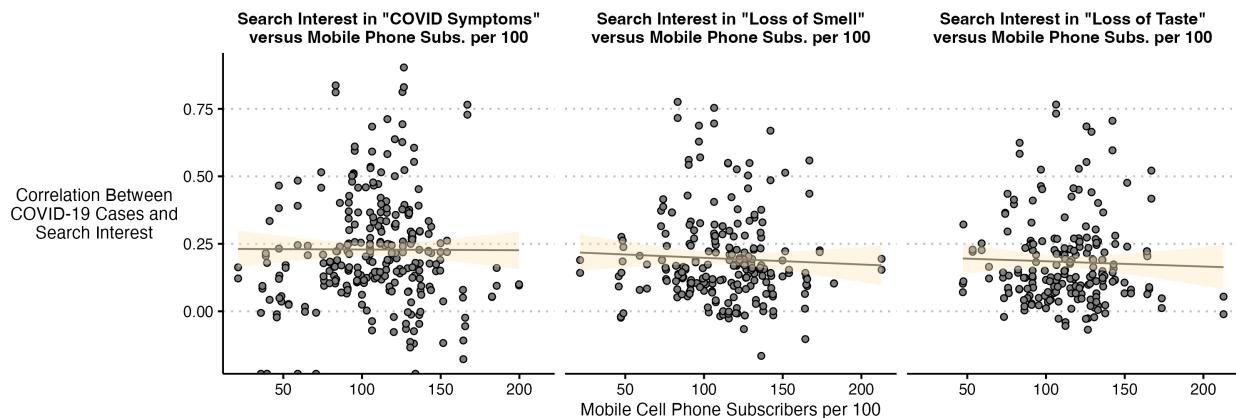


Figure S10: Scatterplots showing association between (1) correlation of search interest and COVID-19 cases and (2) mobile cell phone subscribers per 100, logged, for search interest in “COVID Symptoms”, “Loss of Smell”, and “Loss of Taste.”

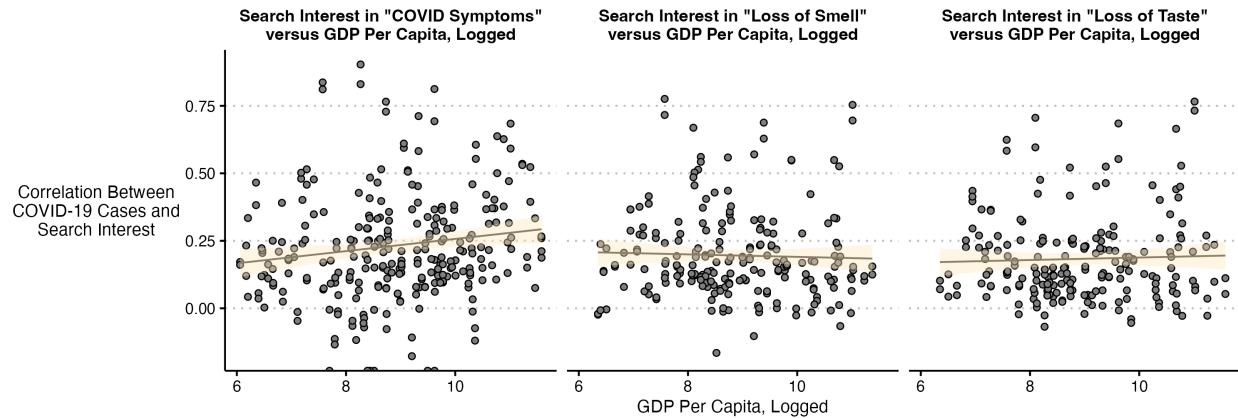


Figure S11: Scatterplots showing association between (1) correlation of search interest and COVID-19 cases and (2) GDP per capita, logged, for search interest in “COVID Symptoms”, “Loss of Smell”, and “Loss of Taste.”

S11 Comparing correlation results using reported COVID-19 cases vs excess mortality

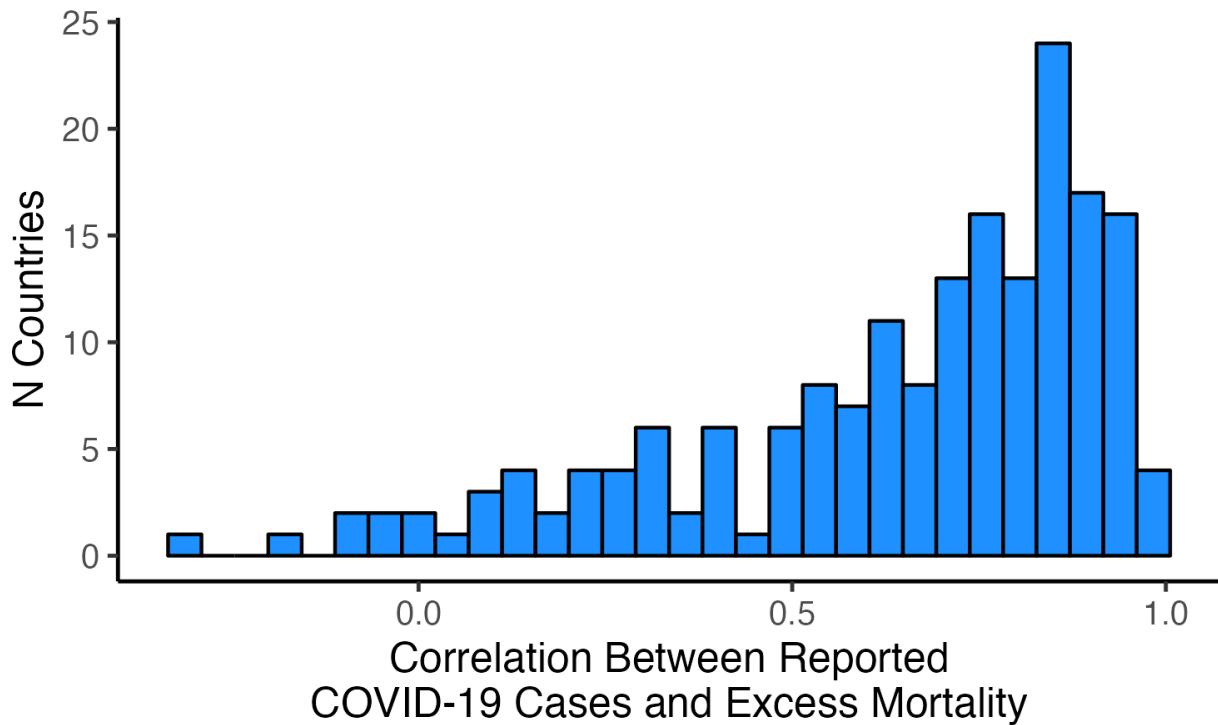


Figure S12: Distribution of within-country correlation between reported COVID-19 cases and excess mortality. Monthly data used from 2020-2021.

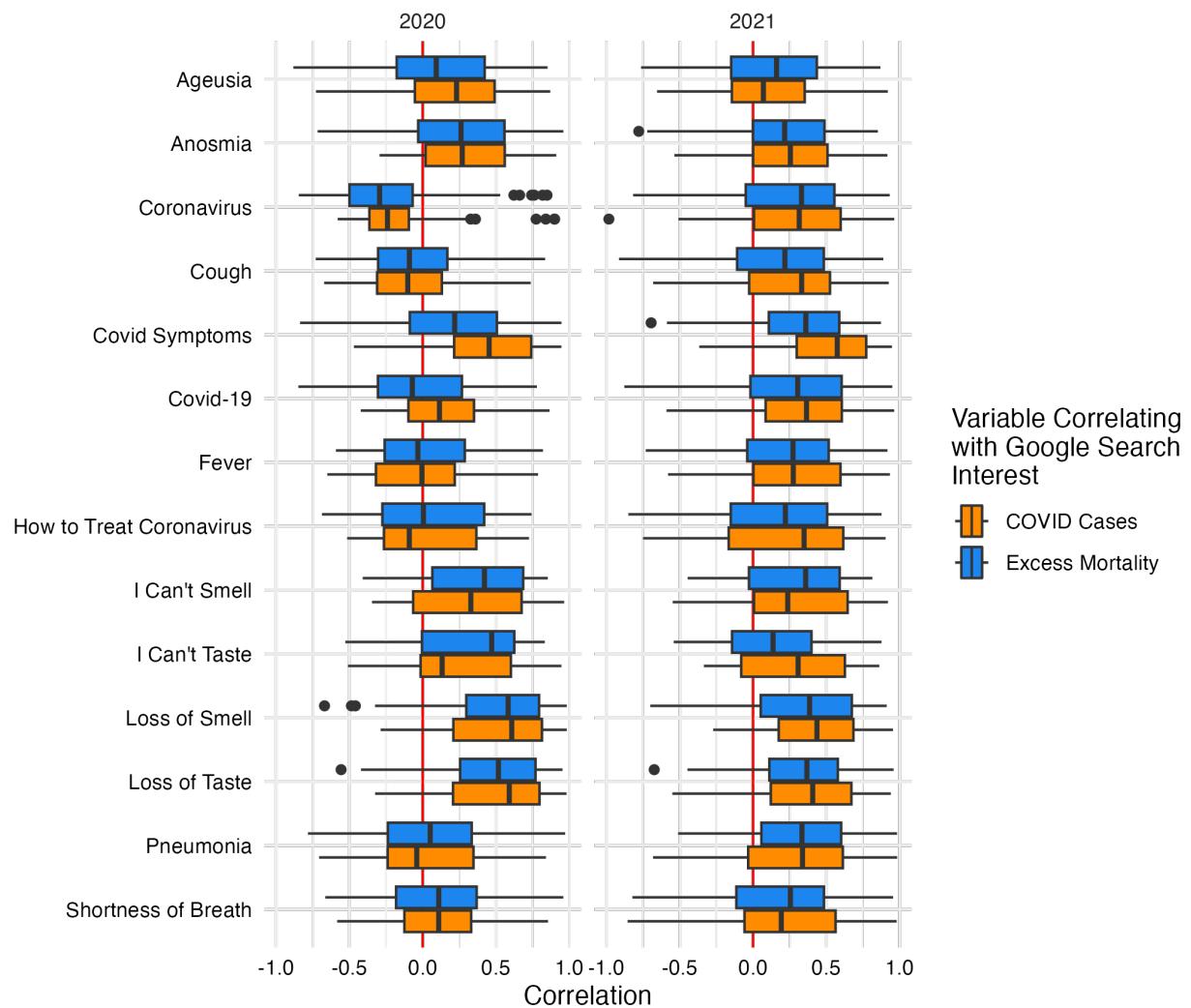


Figure S13: Search interest correlating search interest across search terms and indicators of COVID (COVID cases and excess mortality). Panel A shows the correlation using 2020 data and panel B shows data using 2021 data. The boxplots include: center line, median; box limits, upper and lower quartiles; whiskers, 1.5x interquartile range; points beyond whiskers, outliers.

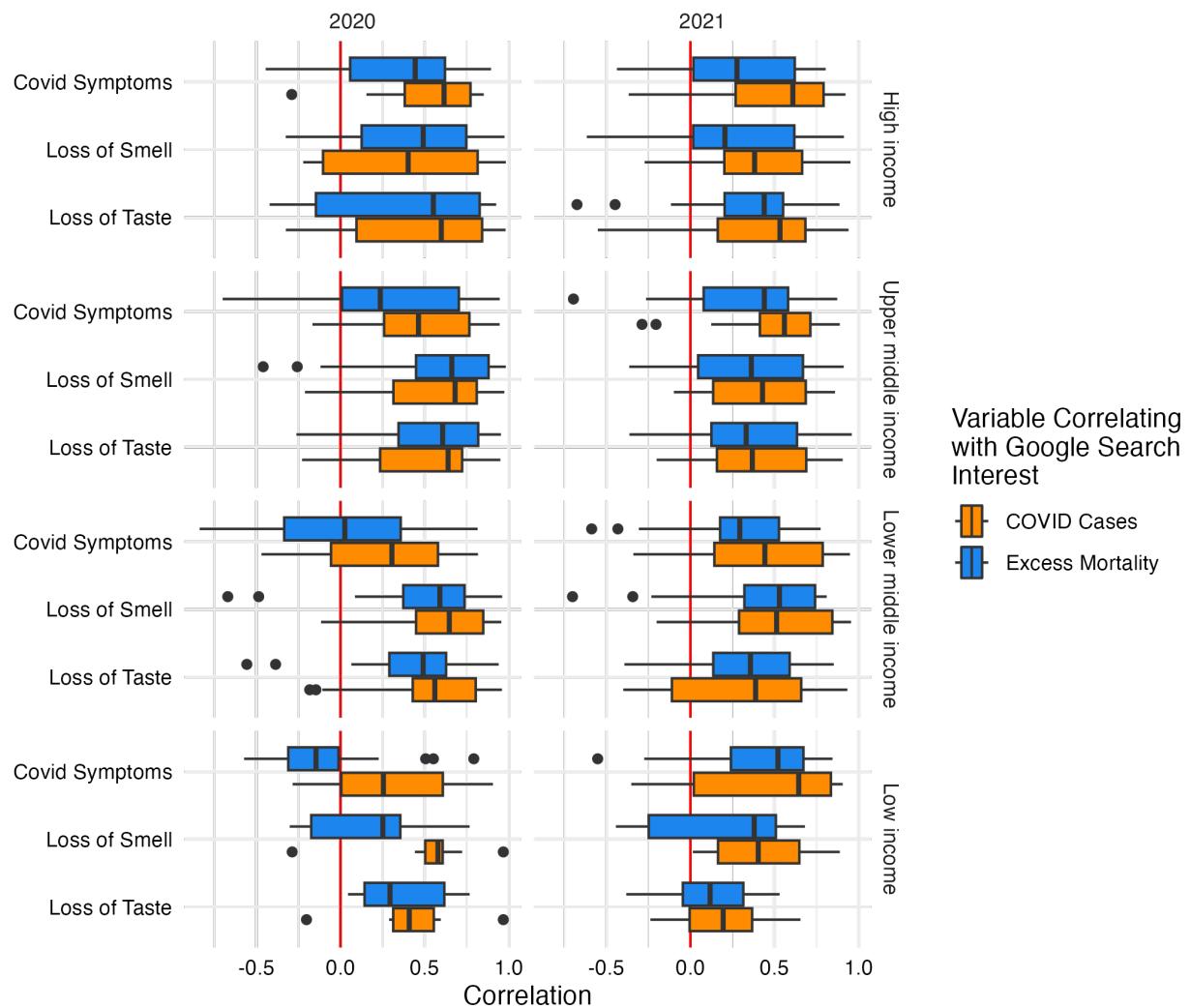


Figure S14: Search interest correlating search interest across search terms and indicators of COVID (COVID cases and excess mortality), by income level and using top Google search interest keywords.

Table S12: Explaining correlation between COVID cases and search interest in Loss of Smell

	<i>Dependent variable:</i>							
	Correlation							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Total COVID-19 Cases, log	0.01 (0.01)						0.02 (0.02)	0.02 (0.02)
Per Pop. Using Internet		-0.0004 (0.001)						0.002 (0.003)
Mobile Cell Sub. per 100			0.0004 (0.001)					0.001 (0.001)
GDP Per Cap, Log				-0.03 (0.02)			-0.10 (0.06)	-0.13* (0.08)
Low Income					0.04 (0.10)		-0.07 (0.24)	-0.01 (0.25)
Lower Middle Income					0.11 (0.07)		-0.01 (0.17)	-0.002 (0.17)
Upper Middle Income					0.02 (0.07)		-0.04 (0.11)	-0.07 (0.11)
Europe and Central Asia						0.08 (0.10)	0.08 (0.10)	0.08 (0.11)
Latin America and Caribbean						0.02 (0.10)	0.01 (0.11)	0.03 (0.11)
Middle East and North Africa						0.12 (0.11)	0.13 (0.11)	0.10 (0.12)
North America						0.53** (0.21)	0.63*** (0.22)	0.67*** (0.23)
South Asia						0.22 (0.18)	0.10 (0.19)	0.13 (0.19)
Sub-Saharan Africa						0.005 (0.11)	-0.11 (0.12)	-0.08 (0.13)
Constant	0.22 (0.18)	0.37*** (0.08)	0.31*** (0.10)	0.62*** (0.20)	0.31*** (0.05)	0.29*** (0.09)	1.00 (0.65)	0.99 (0.68)
Observations	109	104	108	105	107	109	105	103
Adjusted R ²	-0.004	-0.01	-0.01	0.01	-0.002	0.03	0.08	0.07

Table S13: Explaining correlation between excess mortality and search interest in Loss of Smell

	<i>Dependent variable:</i>							
	Correlation							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Total COVID-19 Cases, log	0.05*** (0.01)						0.06*** (0.02)	0.06*** (0.02)
Per Pop. Using Internet		0.002* (0.001)						-0.003 (0.003)
Mobile Cell Sub. per 100			0.001 (0.001)					0.001 (0.001)
GDP Per Cap, Log				0.01 (0.02)			-0.09 (0.06)	-0.06 (0.07)
Low Income					-0.19* (0.11)		-0.04 (0.23)	-0.06 (0.24)
Lower Middle Income					0.06 (0.07)		0.08 (0.16)	0.07 (0.16)
Upper Middle Income					0.07 (0.07)		0.06 (0.11)	0.07 (0.11)
Europe and Central Asia						0.17* (0.10)	0.19* (0.10)	0.20* (0.10)
Latin America and Caribbean						0.06 (0.11)	0.09 (0.11)	0.10 (0.11)
Middle East and North Africa						0.18 (0.11)	0.24** (0.11)	0.26** (0.11)
North America						0.21 (0.22)	0.27 (0.21)	0.29 (0.22)
South Asia						-0.07 (0.18)	-0.21 (0.18)	-0.24 (0.19)
Sub-Saharan Africa						-0.15 (0.11)	-0.13 (0.12)	-0.14 (0.12)
Constant	-0.30* (0.18)	0.23*** (0.08)	0.21** (0.11)	0.29 (0.21)	0.35*** (0.05)	0.31*** (0.09)	0.27 (0.62)	0.12 (0.66)
Observations	109	104	108	105	107	109	105	103
Adjusted R ²	0.11	0.02	0.01	-0.01	0.03	0.13	0.23	0.22

Table S14: Explaining correlation between COVID cases and search interest in Loss of Taste

	<i>Dependent variable:</i>							
	Correlation							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Total COVID-19 Cases, log	0.03*						0.03	0.03*
	(0.01)						(0.02)	(0.02)
Per Pop. Using Internet		-0.0005					-0.002	
		(0.001)					(0.003)	
Mobile Cell Sub. per 100			-0.001				-0.001	
			(0.001)				(0.001)	
GDP Per Cap, Log				0.01			0.02	0.07
				(0.02)			(0.06)	(0.07)
Low Income					-0.02		0.10	0.08
					(0.13)		(0.25)	(0.25)
Lower Middle Income					0.0000		0.09	0.08
					(0.07)		(0.17)	(0.17)
Upper Middle Income					0.01		0.07	0.11
					(0.07)		(0.12)	(0.12)
Europe and Central Asia						-0.02	-0.02	-0.04
						(0.10)	(0.11)	(0.11)
Latin America and Caribbean						-0.02	0.002	-0.01
						(0.11)	(0.11)	(0.11)
Middle East and North Africa						-0.12	-0.09	-0.04
						(0.12)	(0.12)	(0.13)
North America						0.49**	0.45*	0.39*
						(0.22)	(0.23)	(0.23)
South Asia						0.25	0.24	0.22
						(0.18)	(0.19)	(0.19)
Sub-Saharan Africa						0.02	0.09	0.11
						(0.11)	(0.13)	(0.13)
Constant	-0.03	0.36***	0.45***	0.26	0.32***	0.33***	-0.29	-0.59
	(0.20)	(0.09)	(0.12)	(0.21)	(0.05)	(0.09)	(0.66)	(0.68)
Observations	102	98	101	100	100	102	100	98
Adjusted R ²	0.02	-0.01	0.001	-0.01	-0.03	0.05	0.03	0.04

Table S15: Explaining correlation between excess mortality and search interest in Loss of Taste

	<i>Dependent variable:</i>							
	Correlation							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Total COVID-19 Cases, log	0.03** (0.01)						0.04** (0.02)	0.04* (0.02)
Per Pop. Using Internet		-0.0001 (0.001)						-0.01** (0.003)
Mobile Cell Sub. per 100			0.0003 (0.001)					0.001 (0.001)
GDP Per Cap, Log				0.002 (0.02)			-0.03 (0.06)	0.06 (0.07)
Low Income					-0.08 (0.13)		-0.02 (0.26)	-0.07 (0.25)
Lower Middle Income					0.02 (0.07)		0.05 (0.18)	0.04 (0.17)
Upper Middle Income					0.11 (0.07)		0.13 (0.12)	0.18 (0.12)
Europe and Central Asia						0.16 (0.11)	0.16 (0.11)	0.18* (0.11)
Latin America and Caribbean						0.10 (0.11)	0.09 (0.12)	0.08 (0.12)
Middle East and North Africa						0.13 (0.13)	0.15 (0.13)	0.25* (0.13)
North America						0.29 (0.23)	0.30 (0.23)	0.34 (0.23)
South Asia						0.17 (0.19)	0.10 (0.20)	0.02 (0.20)
Sub-Saharan Africa						0.06 (0.12)	0.11 (0.13)	0.06 (0.13)
Constant	-0.07 (0.20)	0.37*** (0.09)	0.33*** (0.12)	0.35* (0.21)	0.33*** (0.05)	0.25*** (0.09)	-0.08 (0.68)	-0.56 (0.69)
Observations	102	98	101	100	100	102	100	98
Adjusted R ²	0.04	-0.01	-0.01	-0.01	0.01	-0.02	0.01	0.06

Table S16: Explaining correlation between COVID cases and search interest in Loss of Taste

	<i>Dependent variable:</i>							
	Correlation							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Total COVID-19 Cases, log	0.01 (0.01)						0.02 (0.01)	0.02 (0.02)
Per Pop. Using Internet		-0.0002 (0.001)						-0.01** (0.003)
Mobile Cell Sub. per 100			0.0003 (0.001)					-0.001 (0.001)
GDP Per Cap, Log				0.02 (0.02)			-0.01 (0.07)	0.06 (0.08)
Low Income					-0.06 (0.09)		-0.31 (0.25)	-0.51* (0.26)
Lower Middle Income					-0.12 (0.07)		-0.25 (0.18)	-0.35* (0.18)
Upper Middle Income					0.01 (0.07)		-0.05 (0.11)	-0.03 (0.11)
Europe and Central Asia						0.06 (0.09)	-0.05 (0.10)	-0.04 (0.10)
Latin America and Caribbean						0.11 (0.09)	0.07 (0.10)	0.04 (0.10)
Middle East and North Africa						-0.13 (0.16)	-0.05 (0.16)	0.04 (0.16)
North America						0.22 (0.24)	0.05 (0.24)	0.03 (0.24)
South Asia						0.27 (0.17)	0.32* (0.17)	0.24 (0.18)
Sub-Saharan Africa						0.14 (0.09)	0.29** (0.11)	0.21* (0.12)
Constant	0.25 (0.16)	0.40*** (0.07)	0.35*** (0.09)	0.24 (0.19)	0.42*** (0.05)	0.29*** (0.08)	0.28 (0.69)	0.26 (0.70)
Observations	129	124	128	126	127	129	126	123
Adjusted R ²	-0.002	-0.01	-0.01	-0.003	0.01	0.01	0.06	0.10

Table S17: Explaining correlation between excess mortality and search interest in Loss of Taste

	<i>Dependent variable:</i>							
	Correlation							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Total COVID-19 Cases, log	0.03*** (0.01)						0.03** (0.01)	0.03* (0.02)
Per Pop. Using Internet		0.002 (0.001)						-0.01 (0.003)
Mobile Cell Sub. per 100			0.001 (0.001)					-0.0004 (0.001)
GDP Per Cap, Log				0.04* (0.02)			-0.05 (0.07)	0.02 (0.08)
Low Income					-0.15 (0.09)		-0.32 (0.26)	-0.42 (0.27)
Lower Middle Income						-0.18** (0.07)	-0.27 (0.18)	-0.33* (0.19)
Upper Middle Income					0.01 (0.07)		-0.04 (0.11)	-0.01 (0.12)
Europe and Central Asia						0.26*** (0.09)	0.13 (0.10)	0.13 (0.10)
Latin America and Caribbean						0.23** (0.10)	0.20** (0.10)	0.16 (0.11)
Middle East and North Africa						0.12 (0.16)	0.18 (0.16)	0.23 (0.17)
North America						0.34 (0.24)	0.16 (0.24)	0.14 (0.25)
South Asia						0.22 (0.18)	0.22 (0.18)	0.15 (0.18)
Sub-Saharan Africa						0.16 (0.10)	0.26** (0.11)	0.19 (0.12)
Constant	-0.18 (0.16)	0.16** (0.07)	0.14 (0.10)	-0.08 (0.19)	0.32*** (0.05)	0.07 (0.08)	0.18 (0.69)	0.11 (0.72)
Observations	129	124	128	126	127	129	126	123
Adjusted R ²	0.05	0.01	0.003	0.02	0.05	0.02	0.08	0.07

S12 Association of containment policies with search interest: event study results

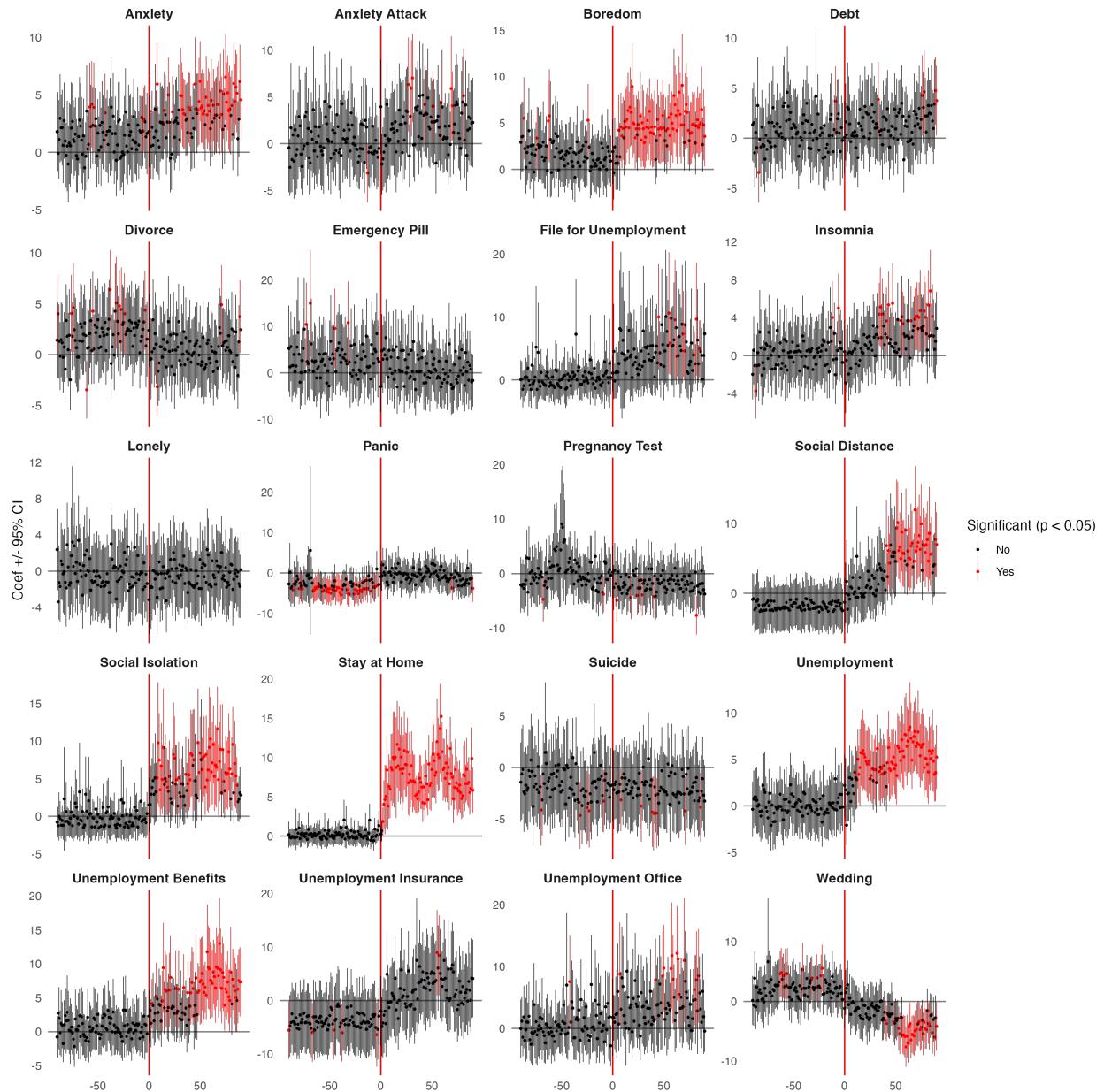


Figure S15: Event study examining the association of containment policies with search interest. 95% confidence intervals shown for each coefficient.

S13 Association of Containment Policies with Search Interest: Sensitivity Analysis Across Different Day Thresholds

S13.1 30 day threshold

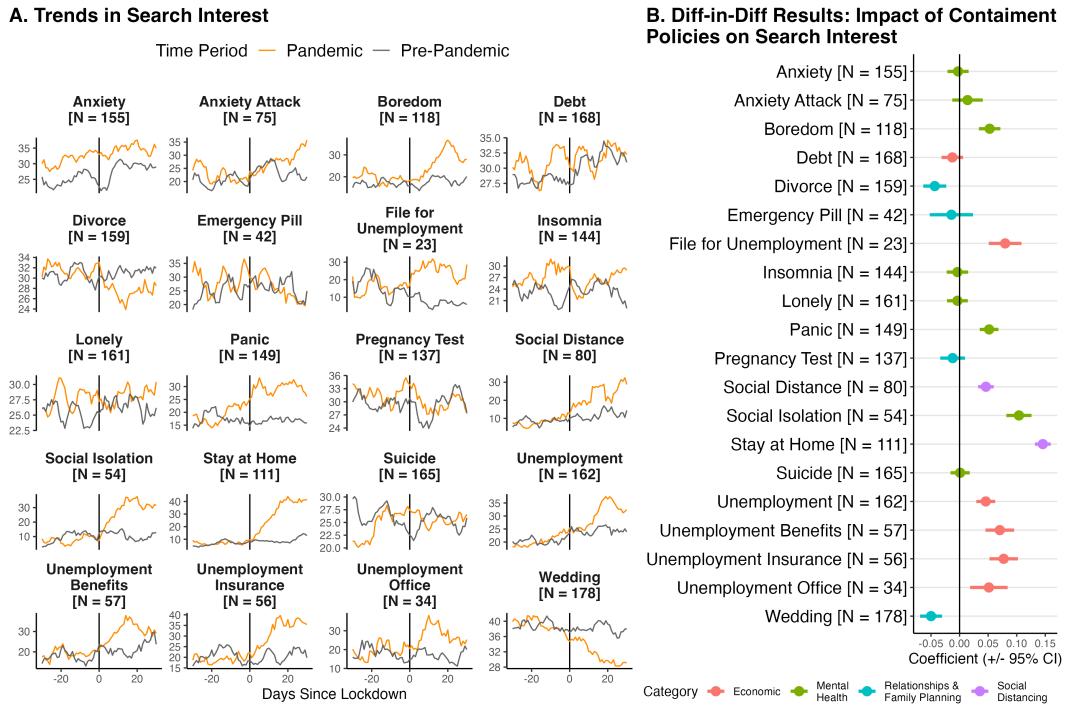
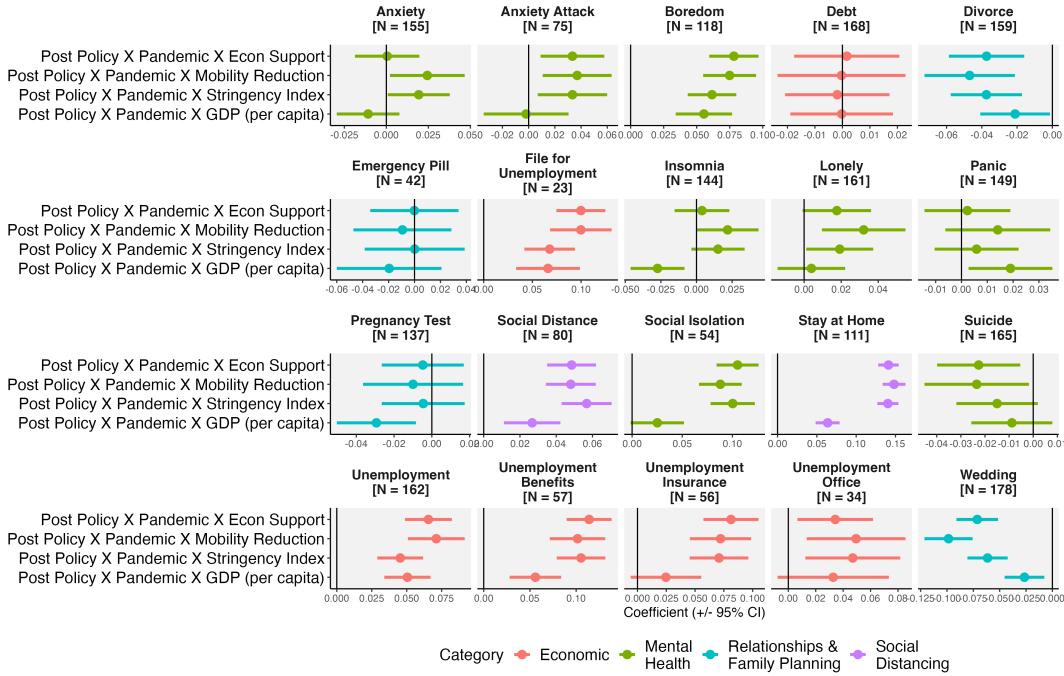


Figure S16: Association of COVID-19 policies with search interest: results pooling all countries. Point estimates and 95% confidence intervals are shown. To more clearly show trends, the seven day moving average of search interest is shown in panel A. 'N' indicates the number of countries with available data.

A. Diff-in-Diff Results: Heterogeneity of Impacts of Containment Policies on Search Interest by Levels of Economic Support, Containment Policy Restrictions, and per capita GDP



B. Maps of Variables



Figure S17: Association of COVID-19 policies on search interest: difference-in-differences results that explore heterogeneity of results across containment policy restrictiveness, economic support, and GDP per capita. Each coefficient comes from a separate regression. The stringency index comes from the University of Oxford COVID-19 Government Response tracker, a composite measure of the restrictiveness of policy measures. Mobility reduction comes from Google COVID-19 Community Mobility Reports, which measure the percent change in mobility relative to pre-pandemic levels. Per capita GDP comes from the World Bank's World Development Indicators; we use log per capita GDP. The Economic Support index from the Oxford COVID-19 Government Response tracker, which measures the extent of economic support across metrics such as income support and debt relief. We standardize all variables into z-scores—having a mean of zero and standard deviation of one. ‘N’ indicates the number of countries with available data. Maps produced using R, version 4.2.2 (<https://www.r-project.org/>); data for country boundaries come from Natural Earth (<https://www.naturalearthdata.com/>).

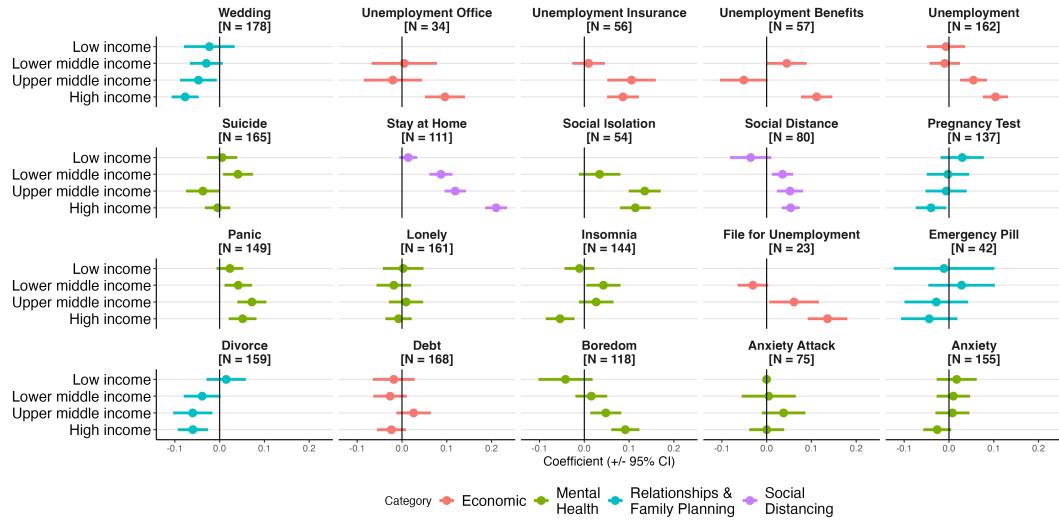


Figure S18: Association of COVID-19 policies with search interest: difference-in-difference results pooling countries by income level. Point estimates and 95% confidence intervals are shown. 'N' indicates the number of countries with available data.

S13.2 60 day threshold

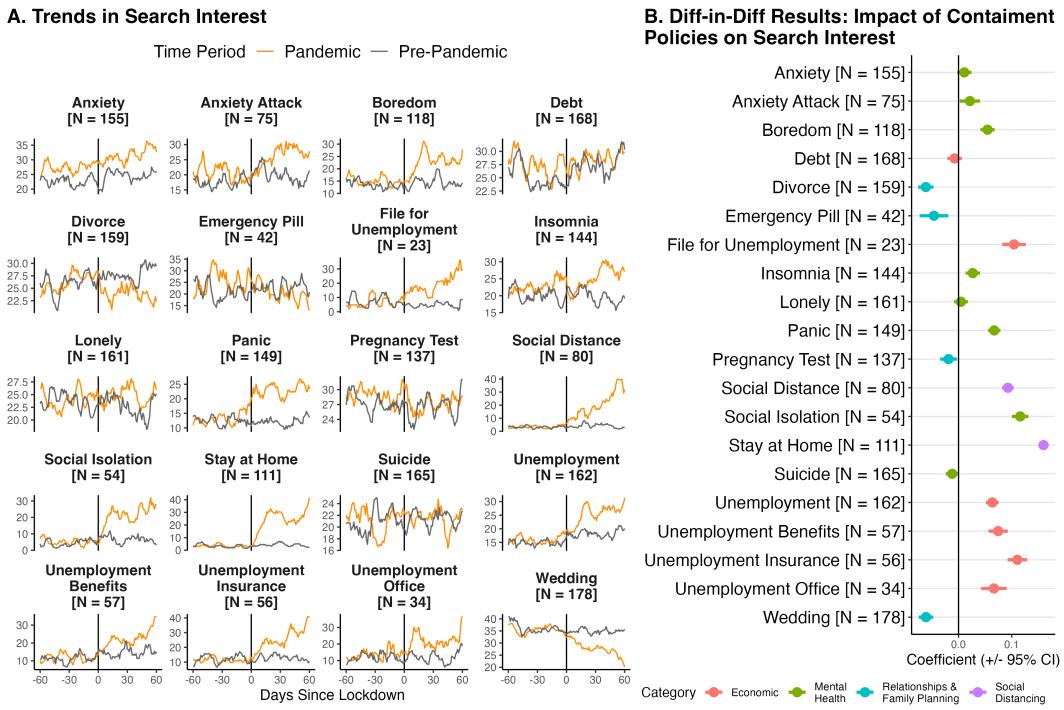
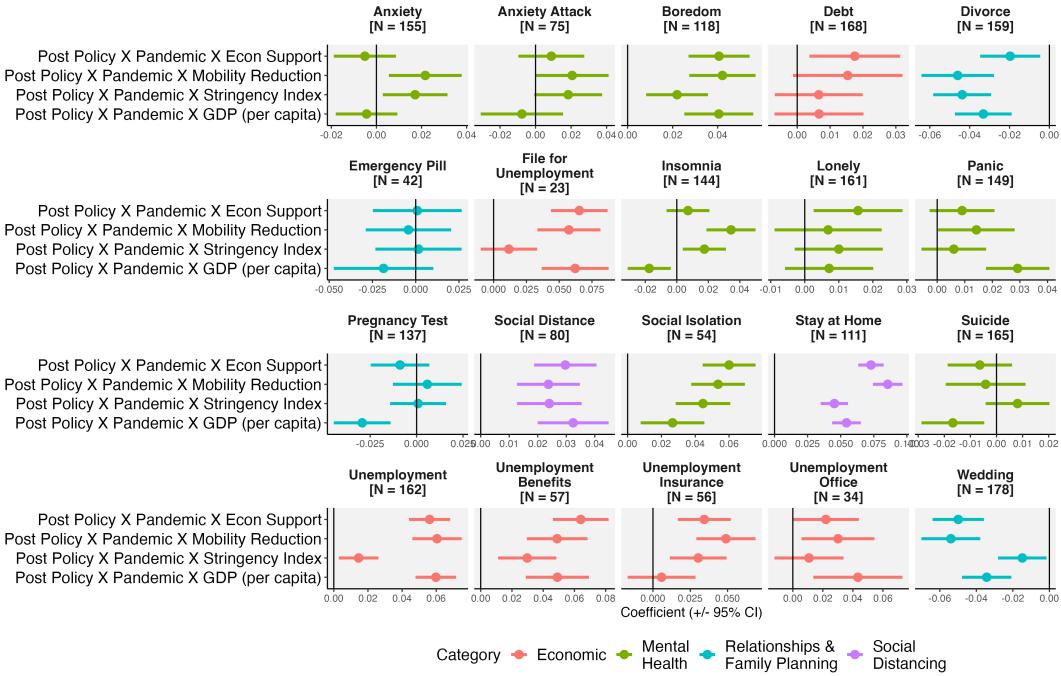


Figure S19: Association of COVID-19 policies with search interest: results pooling all countries. Point estimates and 95% confidence intervals are shown. To more clearly show trends, the seven day moving average of search interest is shown in panel A. 'N' indicates the number of countries with available data.

A. Diff-in-Diff Results: Heterogeneity of Impacts of Containment Policies on Search Interest by Levels of Economic Support, Containment Policy Restrictions, and per capita GDP



B. Maps of Variables



Figure S20: Association of COVID-19 policies with search interest: difference-in-differences results that explore heterogeneity of results across containment policy restrictiveness, economic support, and GDP per capita. Each coefficient comes from a separate regression. The stringency index comes from the University of Oxford COVID-19 Government Response tracker, a composite measure of the restrictiveness of policy measures. Mobility reduction comes from Google COVID-19 Community Mobility Reports, which measure the percent change in mobility relative to pre-pandemic levels. Per capita GDP comes from the World Bank's World Development Indicators; we use log per capita GDP. The Economic Support index from the Oxford COVID-19 Government Response tracker, which measures the extent of economic support across metrics such as income support and debt relief. We standardize all variables into z-scores—having a mean of zero and standard deviation of one. ‘N’ indicates the number of countries with available data. Maps produced using R, version 4.2.2 (<https://www.r-project.org/>); data for country boundaries come from Natural Earth (<https://www.naturalearthdata.com/>).

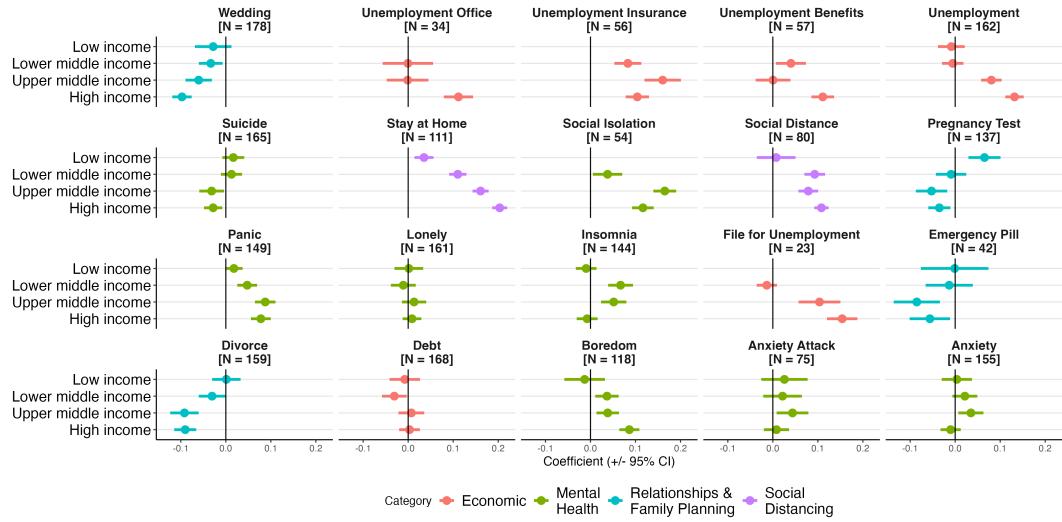


Figure S21: Association of COVID-19 policies with search interest: difference-in-difference results pooling countries by income level. Point estimates and 95% confidence intervals are shown. 'N' indicates the number of countries with available data.

S13.3 120 day threshold

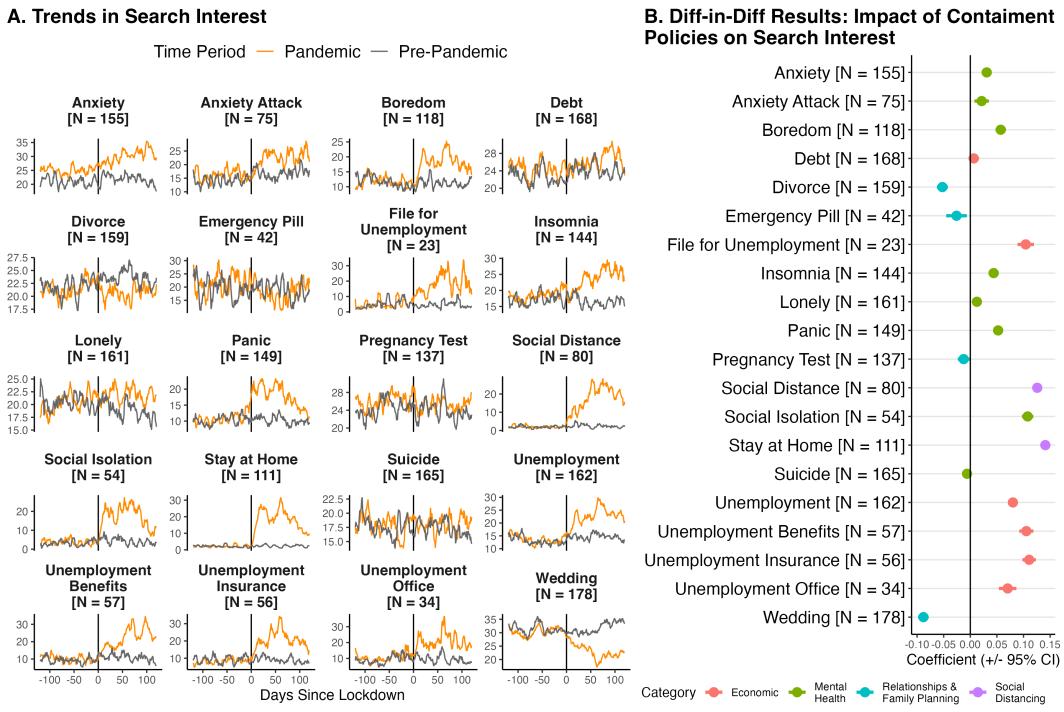
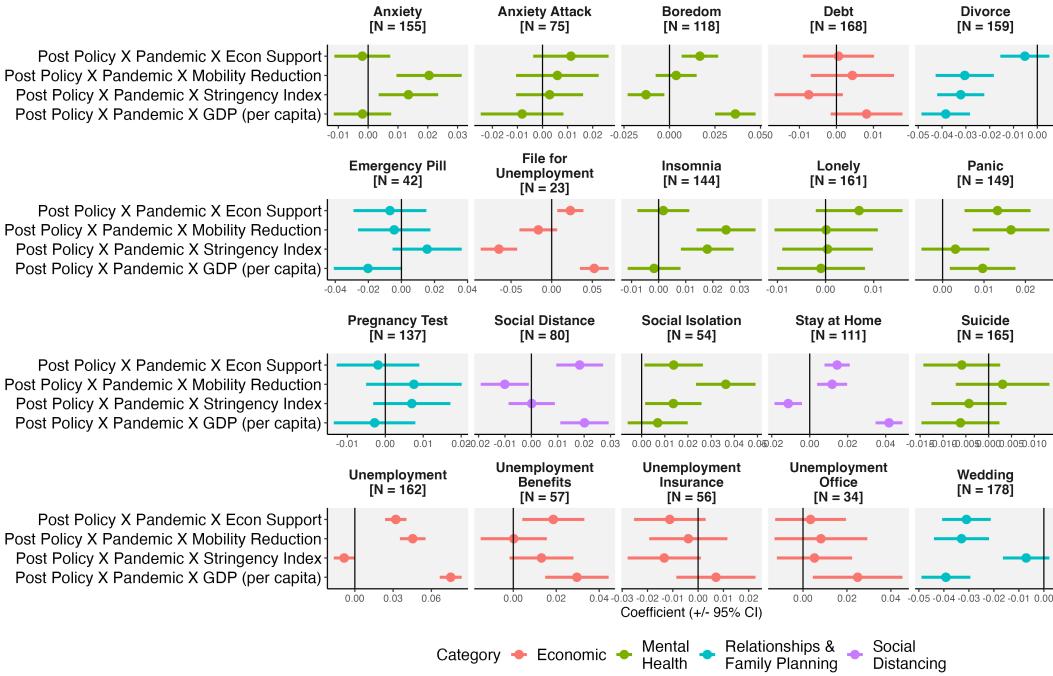


Figure S22: Association of COVID-19 policies with search interest: results pooling all countries. Point estimates and 95% confidence intervals are shown. To more clearly show trends, the seven day moving average of search interest is shown in panel A. 'N' indicates the number of countries with available data.

A. Diff-in-Diff Results: Heterogeneity of Impacts of Containment Policies on Search Interest by Levels of Economic Support, Containment Policy Restrictions, and per capita GDP



B. Maps of Variables



Figure S23: Association of COVID-19 policies with search interest: difference-in-differences results that explore heterogeneity of results across containment policy restrictiveness, economic support, and GDP per capita. Each coefficient comes from a separate regression. The stringency index comes from the University of Oxford COVID-19 Government Response tracker, a composite measure of the restrictiveness of policy measures. Mobility reduction comes from Google COVID-19 Community Mobility Reports, which measure the percent change in mobility relative to pre-pandemic levels. Per capita GDP comes from the World Bank's World Development Indicators; we use log per capita GDP. The Economic Support index from the Oxford COVID-19 Government Response tracker, which measures the extent of economic support across metrics such as income support and debt relief. We standardize all variables into z-scores—having a mean of zero and standard deviation of one. ‘N’ indicates the number of countries with available data. Maps produced using R, version 4.2.2 (<https://www.r-project.org/>); data for country boundaries come from Natural Earth (<https://www.naturalearthdata.com/>).

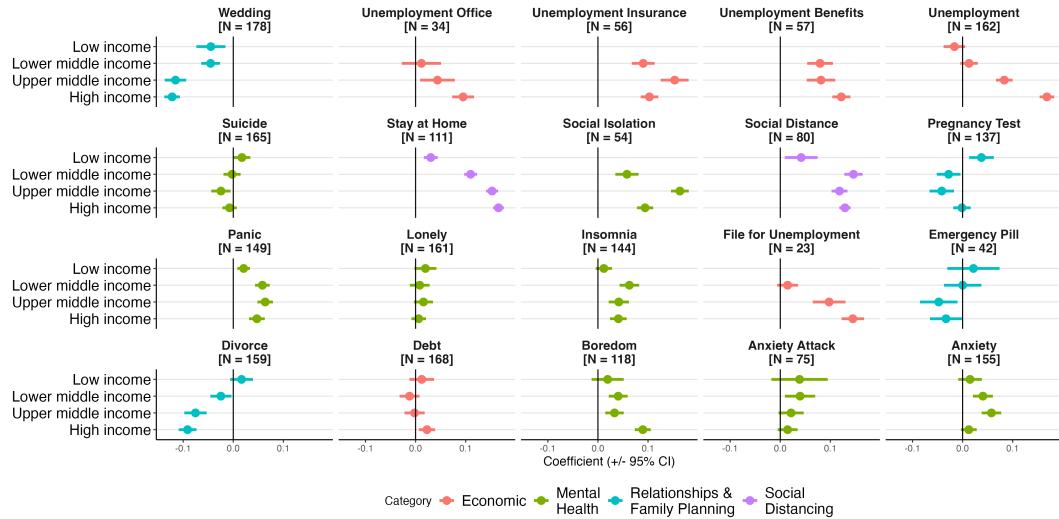


Figure S24: Association of COVID-19 policies with search interest: difference-in-difference results pooling countries by income level. Point estimates and 95% confidence intervals are shown. 'N' indicates the number of countries with available data.

S13.4 180 day threshold

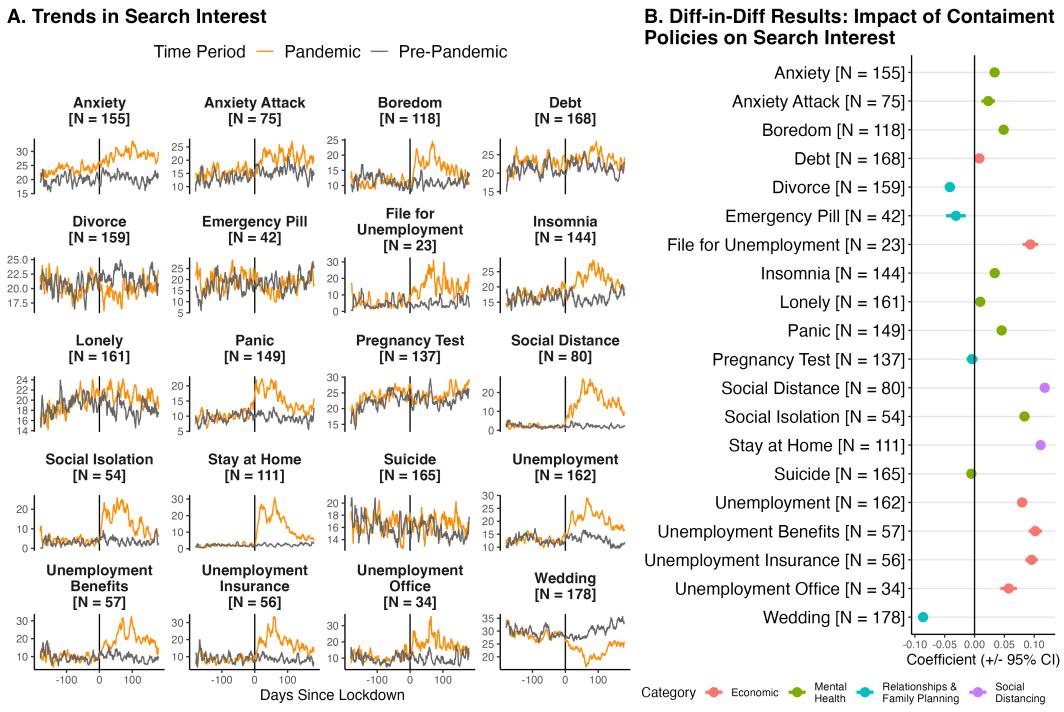
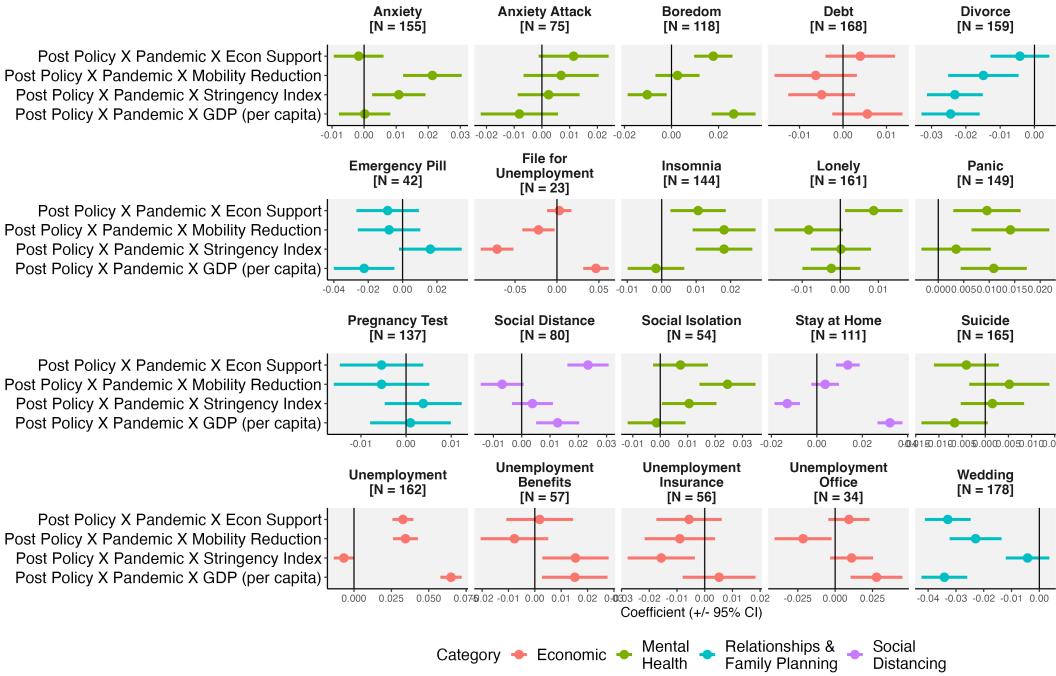


Figure S25: Association of COVID-19 policies with search interest: results pooling all countries. Point estimates and 95% confidence intervals are shown. To more clearly show trends, the seven day moving average of search interest is shown in panel A. 'N' indicates the number of countries with available data.

A. Diff-in-Diff Results: Heterogeneity of Impacts of Containment Policies on Search Interest by Levels of Economic Support, Containment Policy Restrictions, and per capita GDP



B. Maps of Variables

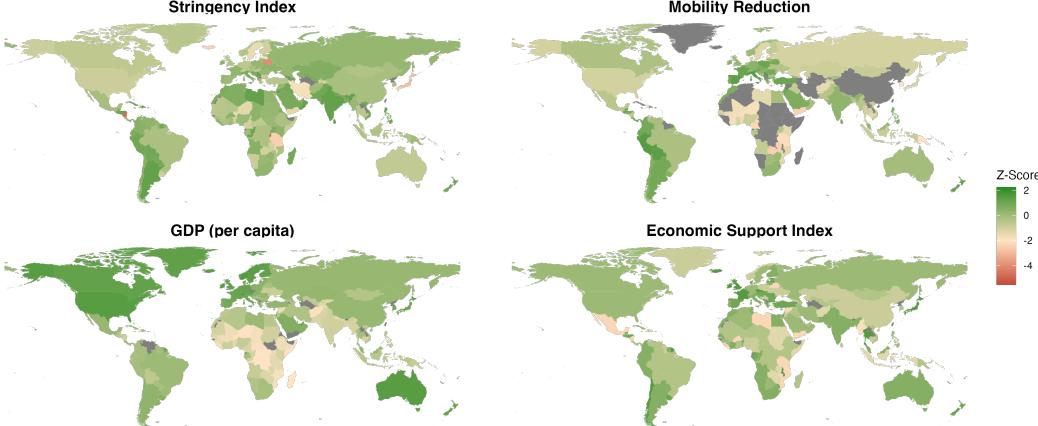


Figure S26: Association of COVID-19 policies with search interest: difference-in-differences results that explore heterogeneity of results across containment policy restrictiveness, economic support, and GDP per capita. Each coefficient comes from a separate regression. The stringency index comes from the University of Oxford COVID-19 Government Response tracker, a composite measure of the restrictiveness of policy measures. Mobility reduction comes from Google COVID-19 Community Mobility Reports, which measure the percent change in mobility relative to pre-pandemic levels. Per capita GDP comes from the World Bank's World Development Indicators; we use log per capita GDP. The Economic Support index from the Oxford COVID-19 Government Response tracker, which measures the extent of economic support across metrics such as income support and debt relief. We standardize all variables into z-scores—having a mean of zero and standard deviation of one. ‘N’ indicates the number of countries with available data. Maps produced using R, version 4.2.2 (<https://www.r-project.org/>); data for country boundaries come from Natural Earth (<https://www.naturalearthdata.com/>).

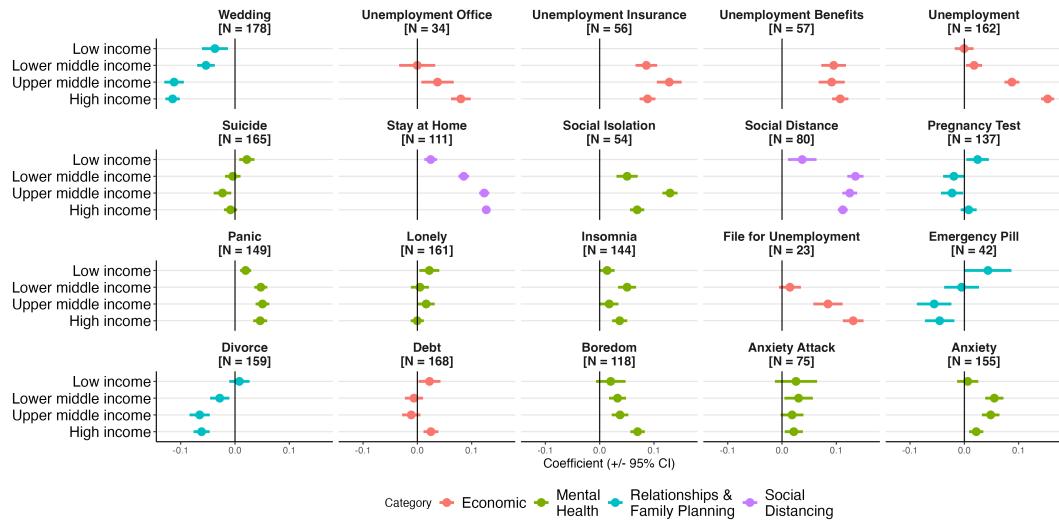


Figure S27: Association of COVID-19 policies with search interest: difference-in-difference results pooling countries by income level. Point estimates and 95% confidence intervals are shown. 'N' indicates the number of countries with available data.