

# Reconnect Research 2020 Coronavirus Survey Results

Research conducted by Paul J. Lavrakas, PhD.

March 24, 2020



N = 4,690 adults 18+; Sampled via RICS<sup>1</sup>; Weighted by Census Region, Sex, Age, Race, Hispanicity, Education, and Party ID; Fielded March 16-22, 2020

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<sup>1</sup> Levine, B., Krotki, K., and Lavrakas, P.J. (2019). Redirected Inbound Telephone Call Sampling (RICS): Telephone Surveying via a New Sampling Paradigm. *Public Opinion Quarterly*, n fz024, <https://doi.org/10.1093/pog/nfz024>

**Executive Summary:** A national survey of U.S. adult residents’ reactions to the coronavirus has been conducted daily since March 16 by Reconnect Research. Through March 22, results from 4,600+ interviews show that approximately 1 in 17 residents (6%) reports that they have had or are experiencing symptoms that may be related to the virus. Half of them reportedly have contacted a medical professional about their symptoms, and approximately 1% report that they have been told that they have, or have had, the virus. Sex, age, and education are related to various reactions the public has regarding the virus. Of note, political party affiliation is consistently related to several of these reactions, with Republicans being (1) most likely to report that they approve of the way the government is handling the virus outbreak, (2) most likely to report that they believe that the spread of the virus is under control, (3) are least likely to report that they have changed their daily life, and (4) are least likely to report being well-informed about ways to prevent getting the virus. Details of the survey’s methodology appear in Appendix A.

***Are you, or someone else in your household, experiencing any health symptoms that may be related to the coronavirus?***

9% Yes  
91% No

Those most likely<sup>2</sup> to respond “Yes” are less than 35 years of age, College graduates, who are not Democrats, and do not live in the South or West.

Those most likely to respond “No” are 50 years of age or older, have no post-secondary education, who are Democrats, and live in the South or West.

**Crosstab**

		DAGE Age group						
		1 18-24 years	2 25-34 years	3 35-49 years	4 50-64 years	5 65 years or older	Total	
QSYMPTOMS Are you, or someone else in your household, experiencing any health symptoms that may be related to the coronavirus?	1 YES	Count	82	98	118	79	54	431
		% within DAGE Age group	13.9%	11.9%	10.2%	6.8%	5.6%	9.2%
	2 NO	Count	506	726	1040	1083	903	4258
		% within DAGE Age group	86.1%	88.1%	89.8%	93.2%	94.4%	90.8%
Total	Count	588	824	1158	1162	957	4689	
	% within DAGE Age group	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	

<sup>2</sup> Multivariate regression beta, p < .001.

**Crosstab**

			educ4 4-level Educational attainment				
			1.00 Not HS Grad	2.00 HS Grad, No College	3.00 Some College	4.00 Bachelor degree	Total
QSYMPTOMS Are you, or someone else in your household, experiencing any health symptoms that may be related to the coronavirus?	1 YES	Count	34	82	124	191	431
		% within educ4 4-level Educational attainment	7.7%	6.0%	9.3%	12.2%	9.2%
	2 NO	Count	407	1274	1206	1372	4259
		% within educ4 4-level Educational attainment	92.3%	94.0%	90.7%	87.8%	90.8%
Total	Count	441	1356	1330	1563	4690	
	% within educ4 4-level Educational attainment	100.0%	100.0%	100.0%	100.0%	100.0%	

**Crosstab**

			democrat		
			.00 No	1.00 Yes	Total
QSYMPTOMS Are you, or someone else in your household, experiencing any health symptoms that may be related to the coronavirus?	1 YES	Count	332	100	432
		% within democrat	10.0%	7.3%	9.2%
	2 NO	Count	2988	1271	4259
		% within democrat	90.0%	92.7%	90.8%
Total	Count	3320	1371	4691	
	% within democrat	100.0%	100.0%	100.0%	

**Crosstab**

			South		
			.00	1.00	Total
QSYMPTOMS Are you, or someone else in your household, experiencing any health symptoms that may be related to the coronavirus?	1 YES	Count	306	125	431
		% within South	10.1%	7.5%	9.2%
	2 NO	Count	2723	1536	4259
		% within South	89.9%	92.5%	90.8%
Total	Count	3029	1661	4690	
	% within South	100.0%	100.0%	100.0%	

**Crosstab**

			West		Total
			.00 No	1.00 Yes	
QSYMPTOMS Are you, or someone else in your household, experiencing any health symptoms that may be related to the coronavirus?	1 YES	Count	328	103	431
		% within West	9.4%	8.7%	9.2%
	2 NO	Count	3178	1081	4259
		% within West	90.6%	91.3%	90.8%
Total	Count	3506	1184	4690	
	% within West	100.0%	100.0%	100.0%	

***Are you, yourself, experiencing any of those symptoms?*** (Asked only of those answering “Yes” in the previous question.)

67% Yes (6% of all respondents)  
33% No

There were no statistically significant correlates ( $p < .001$ ) of this question.

***Have you seen or talked to a doctor or nurse about these symptoms?*** (Asked only of those answering “Yes” in the previous question.)

35% Yes (3% of all respondents)  
65% No

There were no statistically significant correlates ( $p < .001$ ) of this question.

***Did the doctor or nurse say that you have the Coronavirus?*** (Asked only of those answering “Yes” in the previous question.)

42% Yes (1% of all respondents)  
58% No

There were no statistically significant correlates ( $p < .001$ ) of this question.

**Do you approve or disapprove of how the government is handling the virus outbreak?**

63% Approve  
37% Disapprove

Those most likely to approve are Republicans who are high school graduates without any college coursework, and are 50 years of age or older.

Those most likely to disapprove are Democrats who are college graduates and in the 18-24 year old age cohort.

**Crosstab**

			educ4 4-level Educational attainment				
			1.00 Not HS Grad	2.00 HS Grad, No College	3.00 Some College	4.00 Bachelor degree	Total
QGOV Do you approve or disapprove of how the government is handling the virus outbreak?	1 APPROVE	Count	260	881	800	862	2803
		% within educ4 4-level Educational attainment	60.7%	68.5%	63.8%	57.7%	62.8%
	2 DISAPPROVE	Count	168	405	453	633	1659
		% within educ4 4-level Educational attainment	39.3%	31.5%	36.2%	42.3%	37.2%
Total	Count	428	1286	1253	1495	4462	
	% within educ4 4-level Educational attainment	100.0%	100.0%	100.0%	100.0%	100.0%	

**Crosstab**

			DAGE Age group					
			1 18-24 years	2 25-34 years	3 35-49 years	4 50-64 years	5 65 years or older	Total
QGOV Do you approve or disapprove of how the government is handling the virus outbreak?	1 APPROVE	Count	295	460	679	727	643	2804
		% within DAGE Age group	52.0%	60.1%	62.5%	65.4%	68.8%	62.8%
	2 DISAPPROVE	Count	272	305	408	384	291	1660
		% within DAGE Age group	48.0%	39.9%	37.5%	34.6%	31.2%	37.2%
Total	Count	567	765	1087	1111	934	4464	
	% within DAGE Age group	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	

**QGOV Do you approve or disapprove of how the government is handling the virus outbreak? \* DPARTY Party Affiliation Crosstabulation**

			DPARTY Party Affiliation			
			1 REPUBLICAN	2 DEMOCRAT	3 INDEPENDENT	Total
QGOV Do you approve or disapprove of how the government is handling the virus outbreak?	1 APPROVE	Count	946	670	994	2610
		% within DPARTY Party Affiliation	78.4%	51.1%	61.5%	63.1%
	2 DISAPPROVE	Count	261	642	623	1526
		% within DPARTY Party Affiliation	21.6%	48.9%	38.5%	36.9%
Total	Count	1207	1312	1617	4136	
	% within DPARTY Party Affiliation	100.0%	100.0%	100.0%	100.0%	

**How much do you understand about the virus?**

- 8% Basically nothing at all
- 19% Only a little bit
- 39% A fair amount
- 34% A great deal

Those most likely to reporting knowing “A Great Deal” were females, less than the age of 35 years old, and not African American.

Those most likely to report knowing less than “A Great Deal” were males who are 65 years of age or older.

**Crosstab**

			DGENDER Gender		Total
			1 Male	2 Female	
QUNDERSTAND How much do you understand about the virus?	1 Basically nothign at all	Count	203	147	350
		% within DGENDER Gender	8.9%	6.2%	7.5%
	2 Only a little bit	Count	437	467	904
		% within DGENDER Gender	19.2%	19.7%	19.5%
	3 A fair amount	Count	900	901	1801
		% within DGENDER Gender	39.6%	38.0%	38.8%
	4 A great deal	Count	733	858	1591
		% within DGENDER Gender	32.2%	36.2%	34.2%
Total	Count	2273	2373	4646	
	% within DGENDER Gender	100.0%	100.0%	100.0%	

**Crosstab**

			DAGE Age group					
			1 18-24 years	2 25-34 years	3 35-49 years	4 50-64 years	5 65 years or older	Total
QUNDERSTAND How much do you understand about the virus?	1 Basically nothign at all	Count	61	71	83	67	68	350
		% within DAGE Age group	10.5%	8.7%	7.3%	5.8%	7.1%	7.5%
	2 Only a little bit	Count	99	131	217	248	210	905
		% within DAGE Age group	17.1%	16.1%	19.0%	21.5%	22.0%	19.5%
	3 A fair amount	Count	199	316	446	447	394	1802
		% within DAGE Age group	34.4%	38.8%	39.0%	38.7%	41.3%	38.8%
	4 A great deal	Count	220	296	398	394	283	1591
		% within DAGE Age group	38.0%	36.4%	34.8%	34.1%	29.6%	34.2%
Total	Count	579	814	1144	1156	955	4648	
	% within DAGE Age group	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	

**Crosstab**

			Black		
			.00 No	1.00 Yes	Total
QUNDERSTAND How much do you understand about the virus?	1 Basically nothign at all	Count	294	57	351
		% within Black	7.3%	9.0%	7.6%
	2 Only a little bit	Count	728	176	904
		% within Black	18.1%	27.9%	19.4%
	3 A fair amount	Count	1613	189	1802
		% within Black	40.2%	30.0%	38.8%
	4 A great deal	Count	1382	209	1591
		% within Black	34.4%	33.1%	34.2%
Total	Count	4017	631	4648	
	% within Black	100.0%	100.0%	100.0%	

***Do you think the spread of the virus is under control in the United States or is not under control?***

36% Under control  
64% Not under control

Those most likely to say that the spread of the virus is “Under Control” are Republicans.

Those most likely to say “Not Under Control” are Democrats.

**QCONTROL Do you think the spread of the virus is under control in the United States or is not under control?  
\* DPARTY Party Affiliation Crosstabulation**

			DPARTY Party Affiliation			
			1 REPUBLICAN	2 DEMOCRAT	3 INDEPENDENT	Total
QCONTROL Do you think the spread of the virus is under control in the United States or is not under control?	1 Under control	Count	578	377	564	1519
		% within DPARTY Party Affiliation	47.8%	28.0%	34.0%	36.1%
	2 Not under control	Count	630	968	1096	2694
		% within DPARTY Party Affiliation	52.2%	72.0%	66.0%	63.9%
Total	Count	1208	1345	1660	4213	
	% within DPARTY Party Affiliation	100.0%	100.0%	100.0%	100.0%	

***How soon do you think it will be before the spread of the virus is under control?*** (Asked only of those who said “Not Under Control” to previous question.)

- 24% Within the next month or two
- 29% Within six months
- 9% Within a year
- 5% Longer than a year

Those most likely to think it will be “within the next month or two” are Females.

Those most likely to think it will be “longer than a year” are Males.

**QSPREAD How soon do you think it will be before the spread of the virus is under control? \***  
**DGENDER Gender Crosstabulation**

		DGENDER Gender		Total	
		1 Male	2 Female		
QSPREAD How soon do you think it will be before the spread of the virus is under control?	1 Within next month or two	Count	434	522	956
		% within DGENDER Gender	30.3%	34.5%	32.4%
	2 Within six months	Count	650	701	1351
		% within DGENDER Gender	45.3%	46.3%	45.8%
	3 Within a year	Count	219	207	426
		% within DGENDER Gender	15.3%	13.7%	14.4%
	4 Longer than a year	Count	131	85	216
		% within DGENDER Gender	9.1%	5.6%	7.3%
Total	Count	1434	1515	2949	
	% within DGENDER Gender	100.0%	100.0%	100.0%	

***Since the outbreak of the virus, how much, if at all, has your daily life changed?***

- 13% Basically not at all
- 20% Only a little bit
- 31% A fair amount
- 36% A great deal

Those most likely to say their daily life has changed “a great deal” are Females, with a college degree and who are not Republican’s.

Those most likely to say “basically not at all” are Males, who did not graduate from high school, and are Republicans.

**Crosstab**

			DGENDER Gender		Total
			1 Male	2 Female	
QCHANGEDLIFE Since the outbreak of the virus, how much, if at all, has your daily life changed?	1 Basicly not at all	Count	353	249	602
		% within DGENDER Gender	15.6%	10.5%	13.0%
	2 Only a little bit	Count	461	469	930
		% within DGENDER Gender	20.3%	19.8%	20.1%
	3 A fair amount	Count	706	738	1444
		% within DGENDER Gender	31.2%	31.1%	31.1%
	4 A great deal	Count	746	915	1661
		% within DGENDER Gender	32.9%	38.6%	35.8%
Total	Count	2266	2371	4637	
	% within DGENDER Gender	100.0%	100.0%	100.0%	

**Crosstab**

			educ4 4-level Educational attainment				Total
			1.00 Not HS Grad	2.00 HS Grad, No College	3.00 Some College	4.00 Bachelor degree	
QCHANGEDLIFE Since the outbreak of the virus, how much, if at all, has your daily life changed?	1 Basicly not at all	Count	82	196	145	180	603
		% within educ4 4-level Educational attainment	18.9%	14.6%	11.1%	11.6%	13.0%
	2 Only a little bit	Count	97	299	290	244	930
		% within educ4 4-level Educational attainment	22.4%	22.2%	22.2%	15.7%	20.0%
	3 A fair amount	Count	122	442	378	503	1445
		% within educ4 4-level Educational attainment	28.1%	32.9%	28.9%	32.4%	31.1%
	4 A great deal	Count	133	407	496	626	1662
		% within educ4 4-level Educational attainment	30.6%	30.3%	37.9%	40.3%	35.8%
Total	Count	434	1344	1309	1553	4640	
	% within educ4 4-level Educational attainment	100.0%	100.0%	100.0%	100.0%	100.0%	

**Crosstab**

			Republican		Total
			.00	1.00	
QCHANGEDLIFE Since the outbreak of the virus, how much, if at all, has your daily life changed?	1 Basicly not at all	Count	389	212	601
		% within Republican	11.4%	17.3%	13.0%
	2 Only a little bit	Count	671	258	929
		% within Republican	19.7%	21.1%	20.0%
	3 A fair amount	Count	1070	374	1444
		% within Republican	31.4%	30.6%	31.1%
	4 A great deal	Count	1282	380	1662
		% within Republican	37.6%	31.0%	35.8%
Total	Count	3412	1224	4636	
	% within Republican	100.0%	100.0%	100.0%	

***How informed are you about ways to prevent getting the virus?***

- 8% Basicly not at all
- 12% Only a little bit
- 32% A fair amount
- 48% A great deal

Those most likely to say they are informed “a great deal” about preventing getting the virus are Females with a college degree who are not Republicans and not Hispanic.

Those most likely to say they are informed less than “a fair amount” are Males who did not graduate from high school, who are Republicans and Hispanics.

**Crosstab**

			DGENDER Gender		Total
			1 Male	2 Female	
QPREVENT How informed are you about ways to prevent getting the virus?	1 Basicaly not at all	Count	240	149	389
		% within DGENDER Gender	10.6%	6.3%	8.4%
	2 Only a little bit	Count	276	281	557
		% within DGENDER Gender	12.2%	12.0%	12.1%
	3 A fair amount	Count	748	717	1465
		% within DGENDER Gender	33.1%	30.5%	31.8%
	4 A great deal	Count	994	1204	2198
		% within DGENDER Gender	44.0%	51.2%	47.7%
Total	Count	2258	2351	4609	
	% within DGENDER Gender	100.0%	100.0%	100.0%	

**Crosstab**

			educ4 4-level Educational attainment				Total
			1.00 Not HS Grad	2.00 HS Grad, No College	3.00 Some College	4.00 Bachelor degree	
QPREVENT How informed are you about ways to prevent getting the virus?	1 Basicaly not at all	Count	71	132	79	108	390
		% within educ4 4-level Educational attainment	16.4%	10.0%	6.0%	7.0%	8.5%
	2 Only a little bit	Count	80	190	165	122	557
		% within educ4 4-level Educational attainment	18.5%	14.3%	12.6%	7.9%	12.1%
	3 A fair amount	Count	131	444	430	460	1465
		% within educ4 4-level Educational attainment	30.3%	33.5%	32.9%	29.7%	31.8%
	4 A great deal	Count	150	559	632	857	2198
		% within educ4 4-level Educational attainment	34.7%	42.2%	48.4%	55.4%	47.7%
Total	Count	432	1325	1306	1547	4610	
	% within educ4 4-level Educational attainment	100.0%	100.0%	100.0%	100.0%	100.0%	

**Crosstab**

			Republican		Total
			.00	1.00	
QPREVENT How informed are you about ways to prevent getting the virus?	1 Basicaly not at all	Count	271	118	389
		% within Republican	8.0%	9.7%	8.4%
	2 Only a little bit	Count	393	164	557
		% within Republican	11.6%	13.5%	12.1%
	3 A fair amount	Count	1081	385	1466
		% within Republican	31.9%	31.7%	31.8%
	4 A great deal	Count	1649	548	2197
		% within Republican	48.6%	45.1%	47.7%
Total	Count	3394	1215	4609	
	% within Republican	100.0%	100.0%	100.0%	

**Crosstab**

			DHISPANIC Are you of Hispanic, Latino or Spanish origin?		Total
			1 YES	2 NO	
QPREVENT How informed are you about ways to prevent getting the virus?	1 Basicaly not at all	Count	102	282	384
		% within DHISPANIC Are you of Hispanic, Latino or Spanish origin?	12.3%	7.6%	8.5%
	2 Only a little bit	Count	112	434	546
		% within DHISPANIC Are you of Hispanic, Latino or Spanish origin?	13.5%	11.7%	12.1%
	3 A fair amount	Count	269	1165	1434
		% within DHISPANIC Are you of Hispanic, Latino or Spanish origin?	32.5%	31.5%	31.7%
	4 A great deal	Count	345	1817	2162
		% within DHISPANIC Are you of Hispanic, Latino or Spanish origin?	41.7%	49.1%	47.8%
Total	Count	828	3698	4526	
	% within DHISPANIC Are you of Hispanic, Latino or Spanish origin?	100.0%	100.0%	100.0%	

**APPENDIX A**

**METHODOLOGICAL DETAILS**

Sponsor and Data Collection Organization: The sponsor for the survey was Reconnect Research (of Los Angeles). Survox (of San Francisco) conducted the IVR data collection using sample provided by Reconnect Research

Questionnaire Wording: The IVR questions and response options are shown in the main body of the report. The order of the questions in the main body of the report is the order used to administer the questionnaire. The introductory IVR script is shown here:

Please answer our urgent Coronavirus survey, conducted by Reconnect Research. Your call could not be completed and was sent to this survey.
Our findings will be provided to organizations that help people who are being affected by the virus.
If you are in a risky or life-threatening situation press 9, otherwise don't miss this opportunity to have your voice heard! Let's begin!
If you are 18 or older, press 1. If 17 or younger, press 5. To learn more, press any other key.
Thank you. This four-minute survey is voluntary, and your answers are confidential. Please listen to the entire question and answers before responding. For any question, if you would prefer not to answer, press 9.
Reconnect Research, a respected survey research organization, is conducting an important national Coronavirus survey and we would greatly appreciate your feedback.
Reconnect Research relies on good people like you to participate in this urgent confidential Coronavirus survey.

The wording of Demographic/Background questions was as follows, and this is the order in which these questions appeared:

Thanks. For statistical purposes only. If you are Male, press one. if Female press two.
Did you go to college, tech school or vocational school? For Yes press one. For No press two.
Did you graduate from high school? For Yes press one. For No press two.
Did you receive a bachelor's degree or higher? Prompt: For Yes press one. For No press two.
Please select from one of the following age groups. If you are, 18 to 24 Press one. 25 to 34 press two. 35 to 49 press three. 50 to 64 press four. 65 or older press 5.
Are you of Hispanic, Latino or Spanish origin? For Yes press one. For No press two.
Which of the following best represents your race? For White press one. Black press two. Asian press 3. Another race or more than one race press four.
In politics today, do you consider yourself a Republican, Democrat, or Independent? If Republican, press one. If Democrat, press two. If Independent, press three.

Of note, to reduce the likelihood of nonignorable primacy effects in the final data, some questions had their response options spoken in a reverse order a random half of the time. Those questions were about (1) government approval/disapproval, (2) understanding about the virus, (3) spread of the virus, (4) timing of control of the virus, (5) daily life changes, (6) being informed about the virus, and (7) political party affiliation.

Also, an unfolding approach to measuring educational attainment was used, as past R&D that has been conducted at Reconnect Research has shown that this unfolding approach gathers much more accurate data than a single educational attainment question.

Target Population: National sample of the U.S., including Alaska and Hawaii. English-speaking adults aged 18 years or older, who are using the telephone to place a call (see Levine et al., 2019, in Footnote 1, for more about how Redirected Inbound Call Sampling – aka RICS -- works). Data were gathered throughout the 24-hour day, thus both during all daytime hours and all nighttime hours.

Field Period Dates: March 16-22, 2020.

Sampling Frame: The sampling frame is people in the U.S., including Alaska and Hawaii, who are placing calls during the days and nights of the field period, whose call did not reach its intended party and was by happenstance redirected by the telephone service company handling the call to Redirect Research. This generates a nonprobability sample of the U.S. (see Levine et al., 2019). People not covered by this frame are those who did not place a call during the field period and those who placed a call but their call reached the party they intended.

Sample Supplier: As described in Levine et al. (2019), when someone calls a nonworking number, rather than playing an “error” message and ending the call, the caller in RICS is redirected by the telecom company that is handling the call to a survey recruitment and data collection system. (Reconnect Research contracts with various telecom companies for any given survey that it conducts to get its sampled calls.) There are two types of phone numbers that come to Reconnect Research: direct inward dialing (DID), also known as toll calls, and toll-free calls. The method for Reconnect Research to obtain calls to redirect is different for each type of telephone number. Redirecting DID calls requires forming partnerships with local telephone companies. In contrast, calls to nonworking toll-free numbers are provided by telecommunication companies that are the customer of record for large banks of toll-free numbers. Redirecting toll-free calls to nonworking numbers to a data collection system requires access to calls from large banks of nonworking toll-free numbers.

Recruitment of Respondents: The introductory IVR script that was used to screen and recruit respondents is shown earlier in this appendix under the Questionnaire Wording section.

44,790 redirected calls were used for this survey. Of these, 8,086 started the age-screening question or 18.1%. 544 callers indicated that they were not at least 18 years of age and contact with them was terminated. Of the 44,790, 4,690 started the questionnaire or 10.5%. Of the 44,790, 4,328 answered the final question of the survey or 9.7% (which is the very conservative AAPOR RR1 response rate for this survey).

Sampling Design: As described under the Sample Supplier section above, calls that could not reach the party the caller intended are sent throughout the day and night to Reconnect Research by telecom companies. For the current survey Reconnect Research connected these redirected calls to Survox's IVR system to start the recruitment and data collection stages. There was no other formal sampling design other than whatever numbers came into Reconnect Research by chance from its telecom suppliers.

RICS produces a nonprobability sample, which is remarkably heterogenous in well how it represents the U.S. national population. As Levine et al. (2019) note, RICS unweighted final samples often have a considerably larger portion of low-educational attainment and minority respondents than DFRDD unweighted final samples. On other demographic characteristics, RICS unweighted final samples match population parameters, including geographic location, fairly well.

Data Collection Mode: Data were gathered via a self-administered Interactive Voice Response (IVR) methodology in English. Two IVR recorded scripts were used and randomly assigned to cases. One used a human male voice to record the script and the other used a voice synthesized female voice for the script. Comparison of the data from both voices against each other showed no questions that differed at the  $p < .001$  level<sup>3</sup>.

Sample size. A total of 4,690 respondent started the questionnaire. As the questionnaire proceeded there were breakoffs who did not complete the questionnaire. A total of 4,609 completed the questionnaire through the final substantive question about the coronavirus. A total of 4,328 completed the questionnaire through the final background question.

Given that this is a nonprobability sample a margin of sampling error is not reported.

Weighting. Weighting was carried out by using the demographic/background variables that were gathered in the questionnaire and comparing them to their population parameters for adults in the U.S. It also used a geographic area indicator associated with the caller's phone number.

The variables that were used in weighting were geographic location, gender, education, age, race, Hispanicity, and political party affiliation. Party affiliation was used because it was reasoned that some of the questions may well be correlated with political attitudes and that this nonprobability sample would benefit from such a weighting correction. An iterative process was used to bring the distribution of the variables used in weighting within +/- 2 pp of their population parameters. The parameter for party affiliation was based on a combination of national surveys estimates of this parameter.

### **A Total Survey Error Perspective on the Findings**

All surveys suffer from error (be that bias and/or variance). Whether that error is ignorable or nonignorable is subject to differing opinion among the consumers of a given survey.

This survey likely has coverage error, nonresponse error, and measurement error associated with the questionnaire and with respondents. The survey also has sampling error, as all sample surveys do.

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<sup>3</sup> This criterion was chosen to identify nonignorable differences given the very large sample size.

Coverage Error. It is possible that the callers who were sampled for this survey were somewhat more likely to be people who had greater exposure to the coronavirus and were experiencing symptoms that were related to why they were placing the calls that caused them to be sampled. If this is true, then the findings related directly to exposure to the virus would be somewhat over-estimating the underlying constructs they intended to measure.

Nonresponse error. Those sampled callers who were more likely to be exposed to the virus and/or more concerned about the virus may have been more likely to decide to complete the questionnaire. If this is true, then the findings related directly to exposure to and/or concern about the virus would be somewhat over-estimating the underlying constructs they intended to measure.

Respondent-related Measurement error. Respondents who provide data via IVR are known on occasion to exhibit primary effects, whereby they are more likely to choose answers which they hear at the start of a list of response options than those answers they hear at the end. That is why questions that had more than two response options in our survey were asked in one of two random orders. Analyses show that there were significant primacy effects for these questions. Thus, the value of administering the order of response options in both ways (forward and reverse) and then reporting data that include both sets of response orders. Whether this approach eliminated the primacy effects is unknown, but it is very likely that it raised the accuracy level of these data.

Questionnaire-related Measurement Error. The question that ask about approval or disapproval of the government's handling of the virus outbreak yielded data that are unclear as to "which" government the respondent was answering about.

But we surmise that many, if not most, were thinking about the federal government because of the strong correlation shown on Page \_\_ between the answer to this question and political party affiliation. The federal government is now headed by a Republican administration. State and local governments are headed by both Republican and Democrats, and many local governments are nonpartisan. Were a large portion of the respondents thinking about their local or state government, the correlation observed in our data for the government approval/disapproval question would not likely exist. Nevertheless, we recognize that the wording of this question is ambiguous, and we have added the word "federal" to the question as of March 24, 2020.