Social Psychological Measurements of COVID-19: Coronavirus Perceived Threat,

Government Response, Impacts, and Experiences Questionnaires

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Abstract

Major journals have sounded the call for social psychologists to do research on the novel

Coronavirus (COVID-19). Such research is only as good as the measurements used. Across

three studies (total $n = 984$), we developed a battery of social psychology-relevant questionnaires

to measure COVID-19 phenomena: (1) Perceived Coronavirus Threat Questionnaire, (2)

Governmental Response to Coronavirus Questionnaire, (3) Coronavirus Impacts Questionnaire,

and (4) Coronavirus Experience Questionnaire. Exploratory (Study 1) and Confirmatory (Studies

2 and 3) Factor Analyses revealed excellent factor structures for the one-factor Perceived

Coronavirus Threat, the six-factor Governmental Response Questionnaires, and the three-factor

Coronavirus Impacts Questionnaire. The three-factor Coronavirus Experience Questionnaire

yielded poorer psychometric properties overall. Given that brevity is often desired for online

studies, we further recommend psychometrically sound short versions of each questionnaire.

Taken in total, this work offers social psychology researchers a battery of questionnaires to

measure Coronavirus-related phenomena for the duration of the pandemic in U.S. participants.

Social Psychological Measurements of COVID-19: Coronavirus Perceived Threat, Government Response, Impacts, and Experiences Questionnaires

Major journals have sounded the call for social psychologists to do research on the novel Coronavirus (COVID-19). Of course, as in any research endeavor, our field's research on this topic is only as good as the measurements we use (see, e.g., Schoonvelde, Schumacher, & Bakker, 2019). In the present work, we develop and test a battery of face-valid social psychological questionnaires designed to measure various aspects of the psychology of COVID-19. Given the unknown time course of this (or any) major pandemic, we attempted to produce these measurements as quickly as possible without sacrificing scientific rigor.

Overview of Research

These measurements were developed as a part of a larger parent project that examined the interface of the Coronavirus pandemic and political ideology in the United States (Conway, Woodard, Zubrod, & Chan, manuscript in progress). As a part of that project, we developed measurements related to how threatened U.S. participants felt about COVID-19, how they felt about their government response to COVID-19, how they had been impacted by COVID-19, and what their experiences with COVID-19 had been thus far. Below, we report the processes used to develop this battery of questionnaires and the psychometric properties of the final questionnaire set. In all three studies, participants completed additional questionnaires related to the theoretical aims of the project (see Conway et al., manuscript in progress); for brevity's sake, we focus only on development of the central COVID-19 related questionnaires.

Study 1 Methods

Participants

In Study 1, two hundred and seventy-nine Amazon Mechanical Turk (MTurk) participants completed a battery of items we viewed as related to three different areas of COVID-19 psychology: (1) Perceived Coronavirus Threat Questionnaire, (2) Governmental Response to Coronavirus Questionnaire, and (3) Coronavirus Impacts and Experience Questionnaire. Given recently-identified potential issues with MTurk (e.g., Kennedy et al., 2019), across all three studies discussed here, we ensured the highest quality of data by including several screener questions that participants had to answer correctly to be included in the study. Evidence suggests that MTurk still produces excellent data given such safeguards (Kennedy et al., 2019). Analyses for the present set of studies suggest this effort to ensure data quality was successful.

Perceived Coronavirus Threat Questionnaire

Participants completed six items concerning how threatened or worried they were about COVID-19, for example: "Thinking about the coronavirus (COVID-19) makes me feel threatened." Please see Table 1 for the complete list of items.

Governmental Response to Coronavirus Questionnaire

Participants completed 48 items concerning how they felt about their government response to the crisis. These 48 items represented 6 psychological dimensions that occurred across 3 different layers of government (Federal, State, City). For each psychological dimension, participants completed two questions that were parallel for each level of government. For example, for the Restriction dimension, the item "I support Federal government measures to restrict the movement of American citizens to curb the spread of Coronavirus (COVID-19)" measured Federal-level restriction. The same item at the state-level read "I support State government measures to restrict the movement of American citizens to curb the spread of

Coronavirus (COVID-19)", and at the city-level, the item read "I support City government measures to restrict the movement of American citizens to curb the spread of Coronavirus (COVID-19)." The six dimensions are discussed in more detail below. All questions can be seen in Table 2, and the final questionnaires can be found in Appendix B.

Restriction. *Restriction* questions measured the degree that participants wanted their Federal, State, and City governments to restrict citizens to help stop the spread of the virus. A sample question at the Federal level is "I support Federal government measures to restrict the movement of American citizens to curb the spread of Coronavirus (COVID-19)."

Punishment. *Punishment* questions measured the degree that participants wanted their Federal, State, and City governments to punish citizens who violated social distancing rules. A sample question at the Federal level is "I want my Federal government to severely punish those who violate orders to stay home."

Reactance. *Reactance* questions measured the degree that participants felt angry that their Federal, State, and City governments were taking away their freedom during the crisis. These items were adapted from prior work on political reactance (e.g., Conway & Repke, 2019; Conway et al., 2017). A sample question at the Federal level is "I am upset at the thought that my Federal government would force people to stay home against their will."

Research. *Research* questions measured the degree that participants wanted their Federal, State, and City governments to fund research on the virus. A sample question at the Federal level is "I think we should spend most of our Federal resources right now towards finding a vaccine (or other medical cure) for Coronavirus (COVID-19)."

Stimulus. *Stimulus* questions measured the degree that participants wanted their Federal, State, and City governments to give stimulus money back to individual persons to help the

economy. A sample question at the Federal level is "I think it is a good idea for the Federal government to give individual citizens money back during these difficult times to increase spending and keep business going."

Informational Contamination. *Informational Contamination* questions measured the degree that participants felt that they could not trust their Federal, State, and City governments to provide accurate information during the crisis. These items were adapted from prior work on political informational contamination (e.g., Conway & Repke, 2019; Conway et al., 2017). A sample question at the Federal level is "I distrust the information I receive about the Coronavirus (COVID-19) from my Federal government."

Coronavirus Experiences and Impacts Questionnaire

Participants completed 14 items concerning their experiences with, and impacts of, COVID-19. (See Table 3). We had several conceptual dimensions in mind as we wrote these questions: The degree that they might have had COVID-19 or other related diseases recently ("I have been diagnosed with coronavirus (COVID-19)"), the degree that they might have known others who had COVID-19 ("I know someone who has had coronavirus-like symptoms in the last two months"), how much COVID-19 news they had been watching ("I watch a lot of news about the Coronavirus (COVID-19)"), how they have been financially impacted (I have lost job-related income due to the Coronavirus (COVID-19)"), and how they have been psychologically impacted ("The Coronavirus (COVID-19) outbreak has impacted my psychological health negatively"). As we illustrate below, these questions did not cohere into single questionnaire with excellent psychometric properties, and we subsequently split up the measure into two measures for Studies 2 and 3.

Study 1 Results and Discussion

For all questionnaire groups with more than one component factor, we performed a Principle Components, Exploratory Factor Analysis with a Varimax rotation, with a cutoff of an Eigenvalue of 1 for each component.

Perceived Coronavirus Threat Questionnaire

Analysis on the Perceived Coronavirus Threat Questionnaire clearly yielded one component factor with a total variance accounted for of 67.9%. Factor loadings can be seen in Table 1.

Governmental Response to Coronavirus Questionnaire

Analysis on the Government Response to Coronavirus Questionnaire yielded seven component factors with a total variance accounted for of 80.6%. Generally, these factors matched the six-dimensional structure we had intended. (Factor loadings can be seen in Table 2). There were two clear exceptions. First, the second *Punishment* item clearly loaded onto the *Restriction* factor and not the *Punishment* factor. Thus, for Study 2, this item was replaced with a new item designed to better tap into punishment specifically.

Secondly, a seventh factor emerged that was not expected, and more generally, there were some cross-loadings that did not fit a clean factor structure. However, factors loadings (See Table 2) revealed that items loading on this seventh factor (which appeared to capture Informational Contamination unique to the Federal Government) all also loaded more clearly on another factor. Further, it appeared that some of the additional cross-loadings were due to differences across levels of government. This set of observations contributed to our decision to ultimately split the Governmental Response questionnaire into three separate questionnaires

devoted to participants' views of the response of their Federal, State, and City governments separately.

Coronavirus Experiences and Impacts Questionnaire

The Experiences and Impacts Questionnaire yielded five component factors with a total variance accounted for of 73.3%. Factor loadings can be seen in Table 3. The clearest factors were for Psychological Impacts, Financial Impacts, and News Watching. The questions concerning one's own experience with the disease and experience with others seemed to split into two components. Further, the resource-related question did not load on financial impacts as anticipated, but on psychological impacts (though not nearly as strongly as the expected psychological impacts items). As a result of this, we wrote a separate resource impacts subscale for Study 2.

Study 2 Methods

Participants

In Study 2, two hundred and eighty-five Amazon Mechanical Turk (MTurk) participants completed a similar battery of items as Study 1 participants, with identical data quality safeguards as used in Study 1.

Differences from Study 1

Study 2 questionnaires were identical to Study 1 questionnaires except for the following changes. (1) We removed the failed *Punishment* item from the Governmental Response Questionnaire in Study 1, and replaced it (at all three governmental levels) with a new item that more clearly measured punishment. (2) We expanded the Coronavirus Impacts and Experiences questionnaire by (a) adding additional contrait items to several of the presumed subscales, and (b) adding two additional items with the goal of creating a new *Resource Acquisition* subscale.

Study 2 Results and Discussion

Informed by Study 1, in Study 2 Confirmatory Factor Analyses (CFAs) were conducted to more directly test the fit of the expected factor structures. CFAs are a stringent method of substantiating factor structures because of the high standards of CFA fit indices (Costello & Osborne, 2005). The CFAs were conducted using the Lavaan package for R (Rosseel, 2012). Items were standardized, and the maximum likelihood estimation with full information maximum likelihood (FIML) method was used for missing data (Li, 2016).

Perceived Coronavirus Threat Questionnaire

Using CFA, the Perceived Coronavirus Threat Questionnaire showed generally excellent psychometric properties. The Comparative Fit Index (CFI) = .98, and the Tucker-Lewis Index (TLI) = .97, surpassed both the typically accepted minimums (.90) and the typically accepted standards for a "good" fit of the measure to the data (.95; Lai & Green, 2016; Schreiber et al., 2006). Furthermore, the Root Mean Square Error of Approximation (RMSEA) = .09 (90% CI = .05, .13, p = .04), and the Standardized Root Mean Square Residual (SRMR) = .03 also showed good fit; the typical standards for adequate RMSEAs and SRMRs are .10 and below, with .05 and below indicating a "good" fit (Lai & Green, 2016). Overall, this model has both good relative fit (i.e., it does much better than a hypothesized null model, as indicated by the CFI and TLI) and absolute fit (i.e., the model reproduces the data with little error, as indicated by the RMSEA and SRMR).

Governmental Response to Coronavirus Questionnaire

The CFA for the Governmental Response to Coronavirus Questionnaire revealed that it was below the typical standards of acceptable fit, CFI = .83, TLI = .82, Further, the RMSEA = .11 (90% CI = .106, .114, p < .001), and the SRMR = .09, also indicating substandard fit of the

factor structure to the data. Informed by this and also the results of Study 1's Exploratory Factor Analysis, the questionnaire was broken up into three smaller scales, one with questions referencing the federal government, one with questions referencing the state government, and one with questions referencing the city government. Each of these three measures retained the six factors from the overall measure. All three smaller measures and their factor structures demonstrated strong fits to the data (Federal: CFI = .99, TLI = .98, RMSEA = .05, 90% CI = .02, .03, p = .034, SRMR = .03; State: CFI = .99, TLI = .98, RMSEA = .05, 90% CI = .03, .07, p = .48, SRMR = .02; City: CFI = .99, TLI = .98, RMSEA = .06, 90% CI = .04, .08, p = .14, SRMR = .03). Thus, this strongly suggests that, used as separate scales for each level of government, the six-factor structure strongly holds. See Tables 4-6 for factor loadings for these scales.

Coronavirus Experiences and Impacts Questionnaire

Given that the EFA for Study 1 for the Coronavirus Experiences and Impacts Questionnaire was somewhat messy, it is not surprising that the factor structure of this measure demonstrated a substandard fit to the Study 2 data (CFI = .82, TLI = .77, RMSEA = .11, 90% CI = .10, .11, p < .001, SRMR = .09). To seek guidance for Study 3, we looked at factor loadings across the scales (see Tables 7-8) and then did a series of alternative CFAs to identify what might make for the best overall fit.

First, two of the contrait items that did not seem to load well with the other items as anticipated ("I have been NOT been anywhere close to someone who has been diagnosed with coronavirus (COVID-19)" and "I am confident that I have NOT been anywhere close to someone who has had coronavirus-like symptoms in the last two months"; see Table 8) were dropped from the questionnaire. This improved the fit of the measure slightly, though not enough to meet typical fit standards (CFI = .85, TLI = .80, RMSEA = .11, 90% CI = .10, .11, p < .001, SRMR =

.08). As a result, the questionnaire was split into two smaller questionnaires. First, the questionnaire was split into a "Personal Experiences" and an "Experiences with Others" scales. The former included the factors Personal Diagnoses/Symptoms, Financial Impacts, Resource Impacts, and Psychological Impacts, and the latter included Diagnosis of Close Others, Symptoms of Close Others, and COVID-19 News Exposure. The fit of the Personal Experiences Questionnaire was better than the combined scale (CFI = .92, TLI = .89, RMSEA = .10, 90% CI = .09, .11, $p < .001$, SRMR = .07), though most indices still failed to meet the typical fit standards. The fit of the Experiences with Others Questionnaire was poorer (CFI = .80, TLI = .62, RMSEA = .21, 90% CI = .19, .25, $p < .001$, SRMR = .08).

Finally, we created scales based on a more theory-based approach by separating out participants' *Impacts* of COVID-19 (e.g., reports of how it had affected their lives) and their *Experiences* with the disease (e.g., reports of their own and others' symptoms, their own experience seeing news about it). Thus, the Financial Impacts, Resource Impacts, and Depression Impacts were grouped into the Impacts scale, and the Personal Diagnoses/Symptoms, Close Other Diagnosis/Symptoms (combining the original Diagnosis of Close Other and Symptoms of Close Other factors into one), and COVID-19 News Exposure were grouped into the Experiences scale. This seemed to improve the fit the most for the Impacts scale (Impacts: CFI = .94, TLI = .90, RMSEA = .12, 90% CI = .10, .14, $p < .001$, SRMR = .06; Experiences: CFI = .78, TLI = .69, RMSEA = .16, 90% CI = .14, .18, $p < .001$, SRMR = .09). The fit indices for the Impacts questionnaire demonstrate an overall adequate fit though the indices for the Experiences questionnaire are still below typical standards.[1]

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[1] Using EFA factor loadings as a guide, we further created an additional scale for Experiences that grouped all "diagnoses" items together (whether personal or other) and all "symptoms" items together (whether personal or other; see Table 7). This yielded almost identical fit levels for the Experiences questionnaire (CFI = .78, TLI = .69, RMSEA = .16, 90% CI = .14, .18, $p < .001$, SRMR = .10), and improved fit only slightly in Study 3. As a result, we preferred to keep (what seemed to us) the more theoretically-useful groupings.

Study 3 Methods

Participants

In Study 3, four hundred and thirteen Amazon Mechanical Turk (MTurk) participants completed a similar battery of items as Study 1 and Study 2 participants, with identical data quality safeguards as used in Studies 1 and 2.

Differences from Study 2

Study 2 questionnaires were identical to Study 1 questionnaires except that we dropped the two contrait items from the Experiences questionnaire that loaded poorly on the main factors for Study 2.

Study 3 Results and Discussion

We again performed Confirmatory Factor Analyses (CFAs) for Study 3 in a manner identical to Study 2.

Perceived Coronavirus Threat Questionnaire

Similar to Study 2, the Perceived Coronavirus Threat Questionnaire demonstrated an overall adequate-to-good fit to Study 3 data (CFI = .96, TLI = .94, RMSEA = .12, 90% CI = .10, .15, $p < .001$, SRMR = .03).

Governmental Response to Coronavirus Questionnaire

As in Study 2, the three Government Response Questionnaires (separately analyzed for each level of government) demonstrated strong fits to the data (Federal Government Response to Coronavirus Questionnaire: CFI = .99, TLI = .99, RMSEA = .04, 90% CI = .02, .06, $p = .85$, SRMR = .02; State Government Response to Coronavirus Questionnaire: CFI = .99, TLI = .99, RMSEA = .04, 90% CI = .03, .06, $p = .72$, SRMR = .03; City Government Response to

Coronavirus Questionnaire: CFI = .98, TLI = .96, RMSEA = .08, 90% CI = .06, .09, p = .001, SRMR = .03).

Coronavirus Impacts Questionnaire

Recall that after Study 2, we separated the Impacts and Experiences questionnaires. Using CFA in Study 3, the Coronavirus Impacts Questionnaire fit the data well (CFI = .95, TLI = .93, RMSEA = .10, 90% CI = .08, .12, p < .001, SRMR = .05).

Coronavirus Experiences Questionnaire

The Coronavirus Experiences Questionnaire demonstrated a stronger fit than in Study 2, but it still did not meet most typical fit standards (CFI = .83, TLI = .76, RMSEA = .13, 90% CI = .12, .15, p < .001, SRMR = .08). We return to this issue in the general discussion.

Final Scale Intercorrelations

For the questionnaires with multiple scales, we further correlated the developed scales within each questionnaire with the other scales within that questionnaire. A full report is in Appendix A. The scales generally showed expected and sensible correlations with each other. For the Government Responses to Coronavirus Questionnaires, the correlations showed generally the same pattern of scale correlations for each level of government. Correlations ranged from near-zero to .68 in effect size, with typical correlations across all three levels falling in the .2-.5 range. The correlations that one would expect to be theoretically higher (e.g., Reactance with Restriction) were indeed higher.

For the Coronavirus Impacts Questionnaire, scale correlations were all within a narrow range (r's range from .28 to .32), suggesting that while the measured impacts of COVID-19 overlap, they do not overlap *too* much. For the Coronavirus Experiences Questionnaire, most

inter-scale correlations were fairly weak to non-existent, except for a strong correlation between Personal and Other Experiences with COVID-19 ($r = .58$).

Alphas for Final Long and Short Scales

We computed standardized *alphas* for the final scales. As seen in Table 11, these scales generally show very high internal reliability. Further, as discussed in Appendices C and D, we additionally created short versions of the scales, and Table 11 reveals generally excellent internal reliability for those scales as well, most typically falling in the same range as the long version of the scale.

General Discussion

Additional Validity Tests for Studies 1-3

Across all three studies, the parent study (Conway et al., 2020) provided multiple validity tests of the usefulness of the scales developed here. Because we are in this paper attempting to validate the scales, we focus here on the most face valid tests: Namely, those associated with political ideology. As reported in the parent study (Conway et al., 2020), conservatives across all three studies showed significantly lower scores on the Perceived Coronavirus Threat Questionnaire – a finding that is in line with common cultural perceptions of current conservative and liberal beliefs (Kristian, 2020).

For the Governmental Responses to Coronavirus Questionnaire, in line with clear expectations about their ideologies, conservatives across all three studies scored significantly lower on Restriction (across all levels of government) and significantly higher on Reactance (across all levels of government). While generally conservatives oppose restriction from any level of government, importantly – and in line with theoretical expectations about the construct (see Conway et al., 2019) – the effects of Informational Contamination *were* altered by the level

of government. Specifically, conservatives reported trusting the (currently more conservative on average) Federal government more than they trusted the (currently more liberal on average) State and City governments, respectively. In short, this pattern of correlations with Governmental Responses offers strong evidence that the questionnaire is showing expected patterns with political ideology.

Expectations are less clear for the ideology-Impacts and ideology-Experiences relationships – and thus it is unsurprising that those relationships are generally substantially weaker. Nonetheless, pooled analyses combining all three studies reveals that conservatives are significantly less likely to feel the financial, resource, and psychological impacts of COVID-19. They are also significantly less likely to watch COVID-19 related news.

Taken together, this additional validity evidence suggests that the face-valid set of questionnaires here provides a reasonable way to measure several COVID-19-related dimensions. For shortened versions of the scales, please see Appendix D.

Concluding Thoughts

We developed and validated scales for four different areas related to COVID-19: Perceived Threat, Government Response, Impacts, and Experiences. All of those generally performed well in Confirmatory Factor Analyses except for the Experiences questionnaire. This suggests that the Perceived Threat, Government Response, and Impacts questionnaires can be used as separate coherent questionnaire sets. However, although the experiences questionnaire shows good *alphas* if used in a dissected manner (see Table 11), it does not represent a coherent questionnaire. Nonetheless, this set of results, taken in total, offers some already-developed scales for researchers to use as they attempt to understand the psychology of COVID-19.

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Table 1: Study 1, COVID Concern Questionnaire

Items	Component 1
Thinking about the coronavirus (COVID-19) makes me feel threatened.	**.898**
I am afraid of the coronavirus (COVID-19).	**.916**
I am not worried about the coronavirus (COVID-19).*	**-.539**
I am worried that I or people I love will get sick from the coronavirus (COVID-19).	**.865**
I am stressed around other people because I worry, I'll catch the coronavirus (COVID-19).	**.873**
I have tried hard to avoid other people because I don't want to get sick.	**.795**

Note. $N = 279$. Factor loadings above .40 are in bold. *Reverse-scored item.

Table 2: Study 1, Government Responses to Coronavirus Questionnaire

Items	Components						
	1	2	3	4	5	6	7
Federal Government Items:							
I support Federal government measures to restrict the movement of American citizens to curb the spread of Coronavirus (COVID-19).	**.763**	-.348	.135	-.109	.091	.101	-.035
We need strong Federal government officials right now to take action to stop the spread of disease.	**.788**	-.299	.107	-.114	.093	.101	-.027
I want my Federal government to severely punish those who violate orders to stay home.	**.325**	-.074	.171	-.011	.097	**.853**	-.025
It is vital right now that the Federal government strongly enforces social distancing measures.	**.693**	-.284	.253	-.037	.178	.364	-.055
I am upset at the thought that my Federal government would force people to stay home against their will.	-.271	**.796**	-.028	.207	-.026	-.091	.075
It makes me angry that the Federal government would tell me where I can go and what I can do, even when there is a crisis such as Coronavirus (COVID-19).	-.290	**.860**	-.046	.179	-.060	-.048	.020
I think we should spend most of our Federal resources right now towards finding a vaccine (or other medical cure) for Coronavirus (COVID-19).	**.377**	-.089	**.657**	.008	.202	.143	.181
I want to see more Federal research on Coronavirus (COVID-19) because I think that's the best way to stop it.	**.548**	-.069	**.607**	-.078	.200	.055	.246
I think it is a good idea for the Federal government to give individual citizens money back during these difficult times to increase spending and keep business going.	**.423**	-.092	.084	-.139	**.697**	.021	.302
I think a Federal government stimulus package during the virus spread is a good idea.	**.494**	-.128	.079	-.149	**.678**	-.025	.171
I distrust the information I receive about the Coronavirus (COVID-19) from my Federal government.	.011	.067	.021	**.629**	.009	-.018	**.534**
I think the Federal government has an agenda that's causing them not to give the whole story to the populace.	-.056	.046	.025	**.672**	.076	.078	**.564**
State Government Items							
We need strong State government officials right now to take action to stop the spread of disease.	**.749**	-.349	.098	-.153	.203	.181	.071
I want my State government to severely punish those who violate orders to stay home.	.299	-.127	.180	-.011	.137	**.876**	.030
It is vital right now that the State government strongly enforces social distancing measures.	**.673**	-.254	.229	-.089	.204	**.366**	.070

Item							
I am upset at the thought that my State government would force people to stay home against their will.	-.322	**.818**	-.081	.238	-.087	-.137	-.039
It makes me angry that the State government would tell me where I can go and what I can do, even when there is a crisis such as Coronavirus (COVID-19).	-.277	**.838**	-.046	.198	-.037	-.034	.027
I think we should spend most of our State resources right now towards finding a vaccine (or other medical cure) for Coronavirus (COVID-19).	.135	-.124	**.848**	.031	.234	.162	.076
I want to see more State research on Coronavirus (COVID-19) because I think that's the best way to stop it.	**.326**	-.130	**.770**	.021	.251	.131	.104
I think it is a good idea for the State government to give individual citizens money back during these difficult times to increase spending and keep business going.	.158	-.134	.322	-.013	**.801**	.164	.082
I think a State government stimulus package during the virus spread is a good idea.	.182	-.094	**.303**	.015	**.828**	.151	.041
I distrust the information I receive about the Coronavirus (COVID-19) from my State government.	-.126	.191	.022	**.841**	-.073	-.096	.009
I think the State government has an agenda that's causing them not to give the whole story to the populace.	-.114	.230	.027	**.864**	-.005	-.002	-.008

City Government Items:

Item							
I support City government measures to restrict the movement of American citizens to curb the spread of Coronavirus (COVID-19).	**.729**	-.302	.223	-.023	.166	.173	-.104
We need strong City government officials right now to take action to stop the spread of disease.	**.754**	-.285	.179	-.059	.181	.246	-.105
I want my City government to severely punish those who violate orders to stay home.	.282	-.109	.194	.024	.089	**.861**	-.019
It is vital right now that the City government strongly enforces social distancing measures.	**.687**	-.251	.286	-.036	.196	**.374**	-.016
I am upset at the thought that my City government would force people to stay home against their will.	-.291	**.835**	-.071	.210	-.074	-.111	-.056
It makes me angry that the City government would tell me where I can go and what I can do, even when there is a crisis such as Coronavirus (COVID-19).	-.323	**.832**	-.076	.201	-.053	-.057	-.029
I think we should spend most of our City resources right now towards finding a vaccine (or other medical cure) for Coronavirus (COVID-19).	.078	-.018	**.803**	.183	.252	.159	-.303
I want to see more City research on Coronavirus (COVID-19) because I think that's the best way to stop it.	.180	.055	**.759**	.175	.257	.171	-.342

I think it is a good idea for the City government to give individual citizens money back during these difficult times to increase spending and keep business going.	.103	.026	**.345**	.140	**.699**	.100	-.407
I think a City government stimulus package during the virus spread is a good idea.	.105	.043	**.327**	.111	**.753**	.089	-.367
I distrust the information I receive about the Coronavirus (COVID-19) from my City government.	-.125	.249	.076	**.836**	.020	-.025	-.108
I think the City government has an agenda that's causing them not to give the whole story to the populace.	-.075	**.326**	.133	**.790**	.014	.089	-.072

Note. $N = 279$. Factor loadings above .40 are in bold.

Table 3: Study 1, COVID Experiences Questionnaire

Items	Components				
	1	2	3	4	5
I have been diagnosed with coronavirus (COVID-19).	.146	.016	**.769**	.096	.170
I have had coronavirus-like symptoms at some point in the last two months.	**.773**	-.006	.290	.160	.068
I have been sick with something other than the coronavirus in the last two months.	**.628**	.198	-.036	-.004	-.015
The Coronavirus (COVID-19) has impacted me negatively from a financial point of view.	.121	.244	-.033	**.856**	-.059
I have lost job-related income due to the Coronavirus (COVID-19).	.074	.130	.192	**.865**	.010
I have had a hard time getting needed resources (food, toilet paper) due to the Coronavirus (COVID-19).	.077	**.593**	-.043	.368	-.044
I have become depressed because of the Coronavirus (COVID-19).	.123	**.902**	.173	.096	-.019
The Coronavirus (COVID-19) outbreak has impacted my psychological health negatively.	.169	**.899**	.122	.120	-.055
I know someone who has been diagnosed with Coronavirus (COVID-19).	.297	.176	**.705**	-.030	-.104
I have been in close proximity with someone who has been diagnosed with coronavirus (COVID-19).	.230	.079	**.852**	.091	.096
I know someone who has had coronavirus-like symptoms in the last two months.	**.795**	.116	.331	.044	-.031
I have been in close proximity with someone who has had coronavirus-like symptoms in the last two months.	**.825**	.076	.297	.118	.040
I watch a lot of news about the Coronavirus (COVID-19).*	.034	.268	.066	.074	**-.860**
I purposefully try NOT to watch news on Coronavirus (COVID-19).	.070	.151	.231	.017	**.854**

Note. $N = 279$. Factor loadings above .40 are in bold. *Reverse-scored item.

Table 4: Study 2, Federal Government Responses to Coronavirus Questionnaire

Items	Components					
	1	2	3	4	5	6
I support Federal government measures to restrict the movement of American citizens to curb the spread of Coronavirus (COVID-19).	.200	-.324	.171	.179	-.124	**.805**
We need strong Federal government officials right now to take action to stop the spread of disease.	.215	-.316	.207	.179	-.134	**.787**
I want my Federal government to severely punish those who violate orders to stay home.	**.948**	-.095	.077	.133	-.045	.149
It is vital right now that the Federal government strongly punishes people who do not engage in social distancing measures.	**.943**	-.087	.028	.161	.001	.163
I am upset at the thought that my Federal government would force people to stay home against their will.	-.147	**.898**	-.104	-.046	.128	-.252
It makes me angry that the Federal government would tell me where I can go and what I can do, even when there is a crisis such as Coronavirus (COVID-19).	-.043	**.859**	-.146	-.135	.228	-.277
I think we should spend most of our Federal resources right now towards finding a vaccine (or other medical cure) for Coronavirus (COVID-19).	.135	-.055	.081	**.903**	.025	.137
I want to see more Federal research on Coronavirus (COVID-19) because I think that's the best way to stop it.	.154	-.108	.224	**.860**	.009	.132
I think it is a good idea for the Federal government to give individual citizens money back during these difficult times to increase spending and keep business going.	.063	-.084	**.907**	.176	.018	.087
I think a Federal government stimulus package during the virus spread is a good idea.	.038	-.137	**.889**	.112	.003	.198
I distrust the information I receive about the Coronavirus (COVID-19) from my Federal government.	-.098	.170	-.095	-.018	**.898**	-.053
I think the Federal government has an agenda that's causing them not to give the whole story to the populace.	.055	.118	.117	.053	**.893**	-.135

Note. $N = 285$. Factor loadings above .40 are in bold.

Table 5: Study 2, State Government Responses to Coronavirus Questionnaire

Items	Components					
	1	2	3	4	5	6
I support State government measures to restrict the movement of American citizens to curb the spread of Coronavirus (COVID-19).	.140	.169	-.375	-.219	.111	**.821**
We need strong State government officials right now to take action to stop the spread of disease.	.207	.079	-.291	-.214	.105	**.865**
I want my State government to severely punish those who violate orders to stay home.	**.952**	.060	-.091	-.010	.121	.148
It is vital right now that the State government strongly punishes people who do not engage in social distancing measures.	**.949**	.078	-.124	-.023	.126	.122
I am upset at the thought that my State government would force people to stay home against their will.	-.155	-.065	**.861**	.278	-.066	-.289
It makes me angry that the State government would tell me where I can go and what I can do, even when there is a crisis such as Coronavirus (COVID-19).	-.104	-.010	**.862**	.267	-.054	-.326
I think we should spend most of our State resources right now towards finding a vaccine (or other medical cure) for Coronavirus (COVID-19).	.146	.186	-.064	.052	**.921**	.086
I want to see more State research on Coronavirus (COVID-19) because I think that's the best way to stop it.	.109	.293	-.040	.057	**.895**	.084
I think it is a good idea for the State government to give individual citizens money back during these difficult times to increase spending and keep business going.	.088	**.927**	-.036	.000	.218	.065
I think a State government stimulus package during the virus spread is a good idea.	.049	**.918**	-.033	.051	.235	.119
I distrust the information I receive about the Coronavirus (COVID-19) from my State government.	-.069	.000	.259	**.863**	.058	-.230
I think the State government has an agenda that's causing them not to give the whole story to the populace.	.035	.055	.198	**.913**	.058	-.125

Note. N = 285. Factor loadings above .40 are in bold.

Table 6: Study 2, City Government Responses to Coronavirus Questionnaire

Items	Components					
	1	2	3	4	5	6
I support City government measures to restrict the movement of American citizens to curb the spread of Coronavirus (COVID-19).	.161	.067	-.338	-.235	.093	**.826**
We need strong City government officials right now to take action to stop the spread of disease.	.244	.098	-.295	-.153	.067	**.846**
I want my City government to severely punish those who violate orders to stay home.	**.957**	.087	-.099	.011	.112	.155
It is vital right now that the City government strongly punishes people who do not engage in social distancing measures.	**.947**	.085	-.115	.014	.143	.176
I am upset at the thought that my City government would force people to stay home against their will.	-.135	.028	**.908**	.200	.021	-.269
It makes me angry that the City government would tell me where I can go and what I can do, even when there is a crisis such as Coronavirus (COVID-19).	-.099	.009	**.884**	.244	.056	-.309
I think we should spend most of our City resources right now towards finding a vaccine (or other medical cure) for Coronavirus (COVID-19).	.163	.312	.024	.135	**.902**	.091
I want to see more City research on Coronavirus (COVID-19) because I think that's the best way to stop it.	.134	.417	.048	.087	**.866**	.053
I think it is a good idea for the City government to give individual citizens money back during these difficult times to increase spending and keep business going.	.087	**.918**	-.011	.069	.281	.067
I think a City government stimulus package during the virus spread is a good idea.	.087	**.883**	.037	.084	.353	.075
I distrust the information I receive about the Coronavirus (COVID-19) from my City government.	-.013	.040	.232	**.907**	.080	-.157
I think the City government has an agenda that's causing them not to give the whole story to the populace.	.041	.113	.163	**.911**	.116	-.162

Note. $N = 285$. Factor loadings above .40 are in bold.

Table 7: Study 2, COVID Impacts Questionnaire

Items	Components		
	1	2	3
The Coronavirus (COVID-19) has impacted me negatively from a financial point of view.	.157	.192	**.883**
I have lost job-related income due to the Coronavirus (COVID-19).	.151	.112	**.783**
The Coronavirus (COVID-19) has NOT impacted my financial status at all.*	.006	-.066	**-.900**
I have had a hard time getting needed resources (food, toilet paper) due to the Coronavirus (COVID-19).	.159	**.924**	.048
It has been difficult for me to get the things I need due to the Coronavirus (COVID-19).	.179	**.917**	.096
The Coronavirus (COVID-19) has NOT affected my ability to get needed resources.*	-.044	**-.752**	-.225
I have become depressed because of the Coronavirus (COVID-19).	**.912**	.100	.060
The Coronavirus (COVID-19) outbreak has impacted my psychological health negatively.	**.927**	.137	.096
The Coronavirus (COVID-19) pandemic has NOT made me feel any worse than I did before.*	**-.770**	-.126	-.133

Note. $N = 285$. Factor loadings above .40 are in bold. *Reverse-scored item.

Table 8: Study 2, COVID Experiences Questionnaire

Items	Components			
	1	2	3	4
I have been diagnosed with coronavirus (COVID-19).	**.411**	**.587**	-.212	.259
I have had coronavirus-like symptoms at some point in the last two months.	.176	**.809**	.046	-.251
I have been sick with something other than the coronavirus in the last two months.	.079	**.749**	.033	-.150
I know someone who has been diagnosed with Coronavirus (COVID-19).	**.878**	-.001	.092	-.023
I have been in close proximity with someone who has been diagnosed with coronavirus (COVID-19).	**.758**	.311	-.034	-.170
I have been NOT been anywhere close to someone who has been diagnosed with coronavirus (COVID-19).*	-.243	.003	.186	**.696**
I know someone who has had coronavirus-like symptoms in the last two months.	**.688**	.203	.007	-.374
I have been in close proximity with someone who has had coronavirus-like symptoms in the last two months.	**.549**	**.411**	.054	-.483
I am confident that I have NOT been anywhere close to someone who has had coronavirus-like symptoms in the last two months.*	-.077	-.235	-.026	**.822**
I watch a lot of news about the Coronavirus (COVID-19).	.015	.022	**.874**	.093
I purposefully try NOT to watch news on Coronavirus (COVID-19).*	.135	.211	**-.771**	.136
I spend a huge percentage of my time trying to find updates online or on TV about Coronavirus (COVID-19).	.245	.229	**.734**	.219

Note. $N = 285$. Factor loadings above .40 are in bold. *Reverse-scored item.

Table 9: Study 3, COVID Impacts Questionnaire

Items	Components		
	1	2	3
The Coronavirus (COVID-19) has impacted me negatively from a financial point of view.	.163	.219	**.858**
I have lost job-related income due to the Coronavirus (COVID-19).	.121	.096	**.799**
The Coronavirus (COVID-19) has NOT impacted my financial status at all.*	-.105	-.024	**-.852**
I have had a hard time getting needed resources (food, toilet paper) due to the Coronavirus (COVID-19).	**.908**	.164	.075
It has been difficult for me to get the things I need due to the Coronavirus (COVID-19).	**.893**	.191	.167
The Coronavirus (COVID-19) has NOT affected my ability to get needed resources.*	**-.785**	-.061	-.157
I have become depressed because of the Coronavirus (COVID-19).	.066	**.888**	.116
The Coronavirus (COVID-19) outbreak has impacted my psychological health negatively.	.133	**.926**	.117
The Coronavirus (COVID-19) pandemic has NOT made me feel any worse than I did before.*	-.181	**-.700**	-.082

Note. $N = 413$. Factor loadings above .40 are in bold. *Reverse-scored item.

Table 10: Study 3, COVID Experiences Questionnaire

Items	Components		
	1	2	3
I have been diagnosed with coronavirus (COVID-19).	.133	**.796**	-.095
I have had coronavirus-like symptoms at some point in the last two months.	**.805**	.255	.028
I have been sick with something other than the coronavirus in the last two months.	**.750**	.053	-.016
I know someone who has been diagnosed with Coronavirus (COVID-19).	.282	**.612**	.036
I have been in close proximity with someone who has been diagnosed with coronavirus (COVID-19).	.341	**.767**	.053
I know someone who has had coronavirus-like symptoms in the last two months.	**.751**	.270	-.003
I have been in close proximity with someone who has had coronavirus-like symptoms in the last two months.	**.781**	.322	.012
I watch a lot of news about the Coronavirus (COVID-19).	.051	-.017	**.854**
I purposefully try NOT to watch news on Coronavirus (COVID-19).*	.037	.261	**-.702**
I spend a huge percentage of my time trying to find updates online or on TV about Coronavirus (COVID-19).	-.003	.274	**.732**

Note. $N = 413$. Factor loadings above .40 are in bold. *Reverse-scored item.

Table 11, Scale Alphas for Long and Short Versions of Each Scale

_____

Scale	Long	Short
Perceived Coronavirus Threat	.88	.90
Federal Government Response:		
Restriction	.87	n/a
Punishment	.93	n/a
Reactance	.86	n/a
Research	.71	n/a
Stimulus	.89	n/a
Informational Contamination	.85	n/a
State Government Response:		
Restriction	.89	n/a
Punishment	.95	n/a
Reactance	.91	n/a
Research	.88	n/a
Stimulus	.94	n/a
Informational Contamination	.90	n/a
City Government Response:		
Restriction	.88	n/a
Punishment	.95	n/a
Reactance	.94	n/a
Research	.93	n/a
Stimulus	.94	n/a
Informational Contamination	.92	n/a
Impacts:		
Financial	.81	.76
Resource	.86	.93
Psychological	.81	.89
Experiences:		
Personal Diagnosis/Symptoms	.66	n/a
Proximity Others	.79	.71
News	.65	.64

Note: $N = 413$.

Appendix A: Study 3 Correlations Between Subscales

		Fed_restrict	Fed_punish	Fed_reactance	Fed_research	Fed_stimulus	Fed_infocontam
Fed_restrict	Pearson Correlation	1	.511**	-.611**	.429**	.471**	-.040
	Sig. (2-tailed)		.000	.000	.000	.000	.421
	N	413	413	413	413	413	413
Fed_punish	Pearson Correlation	.511**	1	-.331**	.315**	.227**	.079
	Sig. (2-tailed)	.000		.000	.000	.000	.109
	N	413	413	413	413	413	413
Fed_reactance	Pearson Correlation	-.611**	-.331**	1	-.225**	-.337**	.078
	Sig. (2-tailed)	.000	.000		.000	.000	.115
	N	413	413	413	413	413	413
Fed_research	Pearson Correlation	.429**	.315**	-.225**	1	.421**	.080
	Sig. (2-tailed)	.000	.000	.000		.000	.104
	N	413	413	413	413	413	413
Fed_stimulus	Pearson Correlation	.471**	.227**	-.337**	.421**	1	.059
	Sig. (2-tailed)	.000	.000	.000	.000		.232
	N	413	413	413	413	414	413
Fed_infocontam	Pearson Correlation	-.040	.079	.078	.080	.059	1
	Sig. (2-tailed)	.421	.109	.115	.104	.232	
	N	413	413	413	413	413	413

**. Correlation is significant at the 0.01 level (2-tailed).

		state_restrict	state_punish	state_reactance	state_research	state_stimulus	state_infocontam
state_restrict	Pearson Correlation	1	.483**	-.685**	.300**	.372**	-.315**
	Sig. (2-tailed)		.000	.000	.000	.000	.000
	N	413	412	413	413	413	413
state_punish	Pearson Correlation	.483**	1	-.381**	.277**	.277**	-.028
	Sig. (2-tailed)	.000		.000	.000	.000	.576
	N	412	412	412	412	412	412
state_reactance	Pearson Correlation	-.685**	-.381**	1	-.113*	-.236**	.377**
	Sig. (2-tailed)	.000	.000		.022	.000	.000
	N	413	412	413	413	413	413
state_research	Pearson Correlation	.300**	.277**	-.113*	1	.426**	.040
	Sig. (2-tailed)	.000	.000	.022		.000	.416
	N	413	412	413	413	413	413
state_stimulus	Pearson Correlation	.372**	.277**	-.236**	.426**	1	.038
	Sig. (2-tailed)	.000	.000	.000	.000		.440
	N	413	412	413	413	414	413
state_infocontam	Pearson Correlation	-.315**	-.028	.377**	.040	.038	1
	Sig. (2-tailed)	.000	.576	.000	.416	.440	
	N	413	412	413	413	413	413

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

		city_restrict	city_punish	city_reactance	city_research	city_stimulus	city_infocontam
city_restrict	Pearson Correlation	1	.546**	-.680**	.124*	.227**	-.284**
	Sig. (2-tailed)		.000	.000	.012	.000	.000
	N	412	412	412	411	412	412
city_punish	Pearson Correlation	.546**	1	-.341**	.254**	.315**	.074
	Sig. (2-tailed)	.000		.000	.000	.000	.134
	N	412	412	412	411	412	412
city_reactance	Pearson Correlation	-.680**	-.341**	1	.027	-.050	.451**
	Sig. (2-tailed)	.000	.000		.588	.313	.000
	N	412	412	412	411	412	412
city_research	Pearson Correlation	.124*	.254**	.027	1	.585**	.298**
	Sig. (2-tailed)	.012	.000	.588		.000	.000
	N	411	411	411	411	411	411
city_stimulus	Pearson Correlation	.227**	.315**	-.050	.585**	1	.267**
	Sig. (2-tailed)	.000	.000	.313	.000		.000
	N	412	412	412	411	413	412
city_infocontam	Pearson Correlation	-.284**	.074	.451**	.298**	.267**	1
	Sig. (2-tailed)	.000	.134	.000	.000	.000	
	N	412	412	412	411	412	412

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

		COVIDImpact _FINANCIAL	COVIDImpact _RESOURCE	COVIDImpact _DEPRESSED	COVIDExperience_PERSONAL	COVIDExperience_OTHER	COVIDExperience_NEWS
COVIDImpact_FINANCIAL	Pearson Correlation	1	.310**	.275**	.170**	.126*	-.054
	Sig. (2-tailed)		.000	.000	.001	.011	.271
	N	413	413	413	413	413	413
COVIDImpact_RESOURCE	Pearson Correlation	.310**	1	.321**	.094	.063	.019
	Sig. (2-tailed)	.000		.000	.056	.204	.693
	N	413	413	413	413	413	413
COVIDImpact_DEPRESSED	Pearson Correlation	.275**	.321**	1	.129**	.160**	.156**
	Sig. (2-tailed)	.000	.000		.009	.001	.001
	N	413	413	413	413	413	413
COVIDExperience_PERSONAL	Pearson Correlation	.170**	.094	.129**	1	.589**	.005
	Sig. (2-tailed)	.001	.056	.009		.000	.920
	N	413	413	413	413	413	413
COVIDExperience_OTHER	Pearson Correlation	.126*	.063	.160**	.589**	1	.015
	Sig. (2-tailed)	.011	.204	.001	.000		.762
	N	413	413	413	413	413	413
COVIDExperience_NEWS	Pearson Correlation	-.054	.019	.156**	.005	.015	1
	Sig. (2-tailed)	.271	.693	.001	.920	.762	
	N	413	413	413	413	413	413

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Direct access to these scales on Qualtrics can be obtained by e-mailing Luke Conway at luke.conway@umontana.edu.

* = Reverse-scored item.

Perceived Coronavirus Threat Questionnaire

Thinking about the coronavirus (COVID-19) makes me feel threatened.
I am afraid of the coronavirus (COVID-19).
I am not worried about the coronavirus (COVID-19).*
I am worried that I or people I love will get sick from the coronavirus (COVID-19).
I am stressed around other people because I worry I'll catch the coronavirus (COVID-19).
I have tried hard to avoid other people because I don't want to get sick.

Appendix B: Long Versions of the Scales, Cont.

Direct access to these scales on Qualtrics can be obtained by e-mailing Luke Conway at luke.conway@umontana.edu.

* = Reverse-scored item.

Federal Governmental Response to Coronavirus Questionnaire

Restriction Scale
I support Federal government measures to restrict the movement of American citizens to curb the spread of Coronavirus (COVID-19).
We need strong Federal government officials right now to take action to stop the spread of disease.

Punishment Scale
I want my Federal government to severely punish those who violate orders to stay home.
It is vital right now that the Federal government strongly punishes people who do not engage in social distancing measures.

Reactance Scale
I am upset at the thought that my Federal government would force people to stay home against their will.
It makes me angry that the Federal government would tell me where I can go and what I can do, even when there is a crisis such as Coronavirus (COVID-19).

Research Scale
I think we should spend most of our Federal resources right now towards finding a vaccine (or other medical cure) for Coronavirus (COVID-19).
I want to see more Federal research on Coronavirus (COVID-19) because I think that's the best way to stop it.

Stimulus Scale
I think it is a good idea for the Federal government to give individual citizens money back during these difficult times to increase spending and keep business going.
I think a Federal government stimulus package during the virus spread is a good idea.

Informational Contamination Scale
I distrust the information I receive about the Coronavirus (COVID-19) from my Federal government.
I think the Federal government has an agenda that's causing them not to give the whole story to the populace.

Appendix B: Long Versions of the Scales, Cont.

Direct access to these scales on Qualtrics can be obtained by e-mailing Luke Conway at
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* = Reverse-scored item.

State Governmental Response to Coronavirus Questionnaire

Restriction Scale
I support State government measures to restrict the movement of American citizens to curb the spread of Coronavirus (COVID-19).
We need strong State government officials right now to take action to stop the spread of disease.

Punishment Scale
I want my State government to severely punish those who violate orders to stay home.
It is vital right now that the State government strongly punishes people who do not engage in social distancing measures.

Reactance Scale
I am upset at the thought that my State government would force people to stay home against their will.
It makes me angry that the State government would tell me where I can go and what I can do, even when there is a crisis such as Coronavirus (COVID-19).

Research Scale
I think we should spend most of our State resources right now towards finding a vaccine (or other medical cure) for Coronavirus (COVID-19).
I want to see more State research on Coronavirus (COVID-19) because I think that's the best way to stop it.

Stimulus Scale
I think it is a good idea for the State government to give individual citizens money back during these difficult times to increase spending and keep business going.
I think a State government stimulus package during the virus spread is a good idea.

Informational Contamination Scale
I distrust the information I receive about the Coronavirus (COVID-19) from my State government.
I think the State government has an agenda that's causing them not to give the whole story to the populace.

Appendix B: Long Versions of the Scales, Cont.

Direct access to these scales on Qualtrics can be obtained by e-mailing Luke Conway at
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* = Reverse-scored item.

City Governmental Response to Coronavirus Questionnaire

Restriction Scale
I support City government measures to restrict the movement of American citizens to curb the
spread of Coronavirus (COVID-19).
We need strong City government officials right now to take action to stop the spread of disease.

Punishment Scale
I want my City government to severely punish those who violate orders to stay home.
It is vital right now that the City government strongly punishes people who do not engage in
social distancing measures.

Reactance Scale
I am upset at the thought that my City government would force people to stay home against their
will.
It makes me angry that the City government would tell me where I can go and what I can do,
even when there is a crisis such as Coronavirus (COVID-19).

Research Scale
I think we should spend most of our City resources right now towards finding a vaccine (or other
medical cure) for Coronavirus (COVID-19).
I want to see more City research on Coronavirus (COVID-19) because I think that's the best way
to stop it.

Stimulus Scale
I think it is a good idea for the City government to give individual citizens money back during
these difficult times to increase spending and keep business going.
I think a City government stimulus package during the virus spread is a good idea.

Informational Contamination Scale
I distrust the information I receive about the Coronavirus (COVID-19) from my City
government.
I think the City government has an agenda that's causing them not to give the whole story to the
populace.

Appendix B: Long Versions of the Scales, Cont.

Direct access to these scales on Qualtrics can be obtained by e-mailing Luke Conway at
luke.conway@umontana.edu.

* = Reverse-scored item.

Coronavirus Impacts Questionnaire

Financial Scale
The Coronavirus (COVID-19) has impacted me negatively from a financial point of view.
I have lost job-related income due to the Coronavirus (COVID-19).
The Coronavirus (COVID-19) has NOT impacted my financial status at all.*

Resource Scale
I have had a hard time getting needed resources (food, toilet paper) due to the Coronavirus
(COVID-19).
It has been difficult for me to get the things I need due to the Coronavirus (COVID-19).
The Coronavirus (COVID-19) has NOT affected my ability to get needed resources.*

Psychological Scale
I have become depressed because of the Coronavirus (COVID-19).
The Coronavirus (COVID-19) outbreak has impacted my psychological health negatively.
The Coronavirus (COVID-19) pandemic has NOT made me feel any worse than I did before.*

Direct access to these scales on Qualtrics can be obtained by e-mailing Luke Conway at
luke.conway@umontana.edu.

* = Reverse-scored item.

Coronavirus Experiences Questionnaire

Personal Diagnoses/Symptoms Scale
I have been diagnosed with coronavirus (COVID-19).
I have had coronavirus-like symptoms at some point in the last two months.
I have been sick with something other than the coronavirus in the last two months.

Proximity to Others Scale
I know someone who has been diagnosed with Coronavirus
(COVID-19).
I have been in close proximity with someone who has been diagnosed with coronavirus
(COVID-19).
I know someone who has had coronavirus-like symptoms in the last two months.
I have been in close proximity with someone who has had coronavirus-like symptoms in the last
two months.

News Scale
I watch a lot of news about the Coronavirus (COVID-19).
I purposefully try NOT to watch news on Coronavirus (COVID-19).*
I spend a huge percentage of my time trying to find updates online or on TV about Coronavirus
(COVID-19).

Appendix C: Development of Short Versions of the Scales

Due to limited resources or participant time (or both), researchers often seek shortened versions of scales. To facilitate this goal, we here present recommended short versions of each of the scales. The alphas for the shortened scale versions can be found in Table 11. We briefly comment here on the development of these scales (complete short versions of the scales can be found in Appendix D).

Perceived Coronavirus Threat Questionnaire

Across all three studies, three of the items consistently loaded higher on the single factor that comprises the scale – these items serve as an excellent short version of the Perceived Coronavirus Threat Questionnaire.

Governmental Response to Coronavirus Questionnaire

Because the Governmental Response questionnaires at each level of government contain only two items per dimension, for researchers interested in shortening their scales, we recommend using only the Federal Governmental Response to Coronavirus Questionnaire. The scales of this questionnaire are generally highly related to the parallel scales on the other questionnaires (correlations for parallel scales across levels generally in the .60 to .80 range), and the Federal Government response is likely the most subjectively pertinent to most Americans. If researchers have other goals that include other levels of government, then they can select those scales as needed; but for general use, the 12-item Federal scale is recommended.

Coronavirus Impacts Questionnaire

For the Impacts Questionnaire, we recommend a shortened 6-item version that drops the contrait items. This shortened scale set shows similar internal reliability as the longer scale (see Table 11).

Coronavirus Experiences Questionnaire

For the Coronavirus Experiences Questionnaire scale, we recommend that researchers treat it as a series of face-valid independent measures, rather than a coherent scale (see the Factor Analysis results from Studies 1-3 and the alphas in Table 11). As a result, we have selected the best items (based on factor loadings) for each item set and included those in a shortened version in Appendix D. Researchers can then use or adapt those items as they see fit.

Appendix D: Recommended Short Versions of the Scales

Direct access to these scales on Qualtrics can be obtained by e-mailing Luke Conway at
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* = Reverse-scored item.

Perceived Coronavirus Threat Questionnaire (Short)

Thinking about the coronavirus (COVID-19) makes me feel threatened.
I am afraid of the coronavirus (COVID-19).
I am stressed around other people because I worry I'll catch the coronavirus (COVID-19).

Governmental Response to Coronavirus Questionnaire (Short)

Restriction Scale
I support Federal government measures to restrict the movement of American citizens to curb the
spread of Coronavirus (COVID-19).
We need strong Federal government officials right now to take action to stop the spread of
disease.

Punishment Scale
I want my Federal government to severely punish those who violate orders to stay home.
It is vital right now that the Federal government strongly punishes people who do not engage in
social distancing measures.

Reactance Scale
I am upset at the thought that my Federal government would force people to stay home against
their will.
It makes me angry that the Federal government would tell me where I can go and what I can do,
even when there is a crisis such as Coronavirus (COVID-19).

Research Scale
I think we should spend most of our Federal resources right now towards finding a vaccine (or
other medical cure) for Coronavirus (COVID-19).
I want to see more Federal research on Coronavirus (COVID-19) because I think that's the best
way to stop it.

Stimulus Scale
I think it is a good idea for the Federal government to give individual citizens money back during
these difficult times to increase spending and keep business going.
I think a Federal government stimulus package during the virus spread is a good idea.

<u>Informational Contamination Scale</u>
I distrust the information I receive about the Coronavirus (COVID-19) from my Federal government.
I think the Federal government has an agenda that's causing them not to give the whole story to the populace.

Coronavirus Impacts Questionnaire (Short)

<u>Financial Scale</u>
The Coronavirus (COVID-19) has impacted me negatively from a financial point of view.
I have lost job-related income due to the Coronavirus (COVID-19).

<u>Resource Scale</u>
I have had a hard time getting needed resources (food, toilet paper) due to the Coronavirus (COVID-19).
It has been difficult for me to get the things I need due to the Coronavirus (COVID-19).

<u>Psychological Scale</u>
I have become depressed because of the Coronavirus (COVID-19).
The Coronavirus (COVID-19) outbreak has impacted my psychological health negatively.

Coronavirus Experiences Questionnaire (Short)

<u>Personal Diagnoses/Symptoms Scale</u>
I have been diagnosed with coronavirus (COVID-19).
I have had coronavirus-like symptoms at some point in the last two months.
I have been sick with something other than the coronavirus in the last two months.

<u>Proximity to Others Scale</u>
I have been in close proximity with someone who has been diagnosed with coronavirus (COVID-19).
I have been in close proximity with someone who has had coronavirus-like symptoms in the last two months.

<u>News Scale</u>
I watch a lot of news about the Coronavirus (COVID-19).
I spend a huge percentage of my time trying to find updates online or on TV about Coronavirus (COVID-19).