Effects of Death Anxiety on Covid-19 Health-Related Prosocial Behavior Cooperation

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Abstract

In the past year, the Covid-19 pandemic has caused over 3 million deaths worldwide, over 500,000 in the US alone. The constant awareness of the potential for one's own sickness and even death has created the perfect scenario for experiencing death anxiety. Viewing the issue of slowing and stopping the spread of Coronavirus as a collective action problem and willingness to cooperate with health and government recommendations as prosocial behaviors, the question was how does death anxiety affect people's willingness to cooperate with Covid-19 health regulations. Participants (*N= 121*) were selected through Mechanical Turk and randomly assigned to view a Neutral video, a General Mortality Salience video, or a Covid-19 Mortality Salience video. Their general anxiety (GAD-7), death anxiety (DAS), and willingness to comply with Covid-19 regulations generally and if mandated by the government were measured. Results showed significant differences between the Covid-19 Mortality Salience group and the Neutral group in general anxiety levels. No other significant differences were found between the three video condition groups on the dependent measures. The results did show the Covid-19 Mortality Salience group trending toward being more willing to comply with health regulations, but not at a significant level.

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In the beginning of 2021, the number of deaths from coronavirus (Covid-19) reached over 3 million. Over 500,000 people died in less than a year from Covid-19 in the US. Covid-19 was and continues to be a frightening disease. When there is constant news coverage of the growing tally of cases and deaths, and everything from commercials, TV shows, social media, and going anywhere outside the home serve as a reminder of what is happening, trying to escape the reality of the situation is difficult. Being constantly reminded of death and the potential for death during such a traumatic period is sure to cause major psychological effects.

Neary a year into the continuing saga that is the pandemic, it would seem that most people have accepted or, at the least, begrudgingly complied with government regulations and mandates aimed at reducing the spread of the virus. In the United States, especially, the push back against these rules has been vocal and considerably large. Early on during the stay-at-home orders that many governors enacted in their states, thousands of citizens protested in large gatherings while not wearing masks or staying the recommended six feet apart from each other in order to protest for what they believed to be their constitutional freedoms. Having become agitated with the restrictions on their mobility and the economic impact of the forced shutdowns, then and now, people shirk off the personal responsibilities of public health and choose to ignore government recommendations. The impact of these decisions though can be costly to the health of those around them and, on a larger scale, hold back the progress that is being made towards the reduction of the spread of the virus.

Even newly inaugurated President Joe Biden signing an executive order requiring face coverings be worn on all federal properties and on public transportation, the ire of the anti-mask collective against other public health recommendations continue. With the start of the rollout of

vaccinations for the coronavirus, the federal government is hoping to have a large number of people vaccinated within this year alone. President Biden started his term promising 100 million vaccinations in his first 100 days in office, and his chief medical advisor, Dr. Anthony Fauci, claimed in his first press conference as part of the new administration that the nation would need to reach around 70-85% of the population to be vaccinated in order for the nation to start heading towards herd immunity and normalcy (Alonso-Zaldivar & Miller, 2021; U.S Office of the Press Secretary, 2021).

But these large-scale public health initiatives require not just the work of the government to get all the rules, laws, mandates, materials, etc. in place, it requires the collective action of the American people. Unfortunately, as anyone versed in politics knows, the problem of collective action is one of the hardest to fix. Coming up with incentives or coercive actions that encourage or force people to cooperate is incredibly difficult. Examples of collective action problems in politics are increasing voter turnout, environmental changes like switching over to renewable energy sources, and even the assurance of public safety. It would be better for everyone in the group to coordinate and cooperate, but the conflicting individual interests of everyone in the group hinder progress. There are also free riders who reap the benefits of successful group action without having to take any direct action themselves. Looking towards the future, the collective action of the populace in following health regulations regarding COVID-19 and taking steps to help slow or stop the spread of the disease (wearing masks, reducing leaving the home, and vaccinations) can be seen as prosocial behaviors that benefit the community, but also ultimately benefit the individual.

Terror Management Theory

Terror Management Theory (TMT) explains how humans deal with the cognitive dissonance that comes with being aware of one's own mortality and the biological and psychological needs for self-preservation and survival (Pyszczynski, Solomon, & Greenberg, 1986). However, it is an unconscious process so people don't recognize their feelings and behaviors as linked to this process. They are not actively making the decision to be afraid of their own death or to respond in certain ways, the internal mechanisms of the mind just use the already established values and attitudes to respond to the anxiety. When faced with the anxiety associated with death after becoming aware of it, people shore up their cultural worldviews and self-esteem to protect themselves (Greenberg & Arndt, 2012). They turn more insular towards their beliefs, identifying ingroup and outgroup members, ideas, actions, etc. and become protective of them. This can result in positive ways (prosocial behavior) or negative ways (prejudice). And in the opposite direction, when threats are made or felt against the worldviews or self-esteem of a person, the accessibility of mortality salience (MS) is heightened. Validating someone's worldviews and boosting their self-esteem helps counteract death anxiety and the threat brought upon those two things when mortality salience is experienced.

There has been an uptick in the number of studies using TMT since the pandemic started. Understandably, the effects of the large amount of death that has occurred in such a short period on people's emotions, attitudes, and behaviors would be of interest to many psychologists. While there have been studies looking at TMT and prosocial behavior during the pandemic and studies looking at TMT and responsiveness to health-measures, the new element this study brings in is looking at prosocial behavior not just in terms of generosity or helping people through the pandemic, but specifically at the willingness to follow government regulations and recommendations as the prosocial behavior itself.

The Collective Action Problem of COVID-19

Johnson et al. (2020) claimed that to reduce the transmission of the virus "public officials must help their communities resolve a series of novel social dilemmas" (p.1). Social dilemma is another term for a collective action problem in which the benefits and self-interests of the few in the moment outweigh the interests of the many in the long run. In terms of the current state of the world, getting individuals to comply with all the necessary safety precautions and health recommendations from state and national leaders, and organizations like the CDC and WHO has been a challenge. President Biden signed an executive order making wearing a mask mandatory on federal property, and even still the enforcement of it is not perfect.

In 1968, Garret Hardin created the "Tragedy of the Commons", a metaphor for the collective action problem in which the common pooled resource of grassy lands for cattle to graze is used up when self-interested people break the rule of only bringing one cow and start bringing multiple, leading others to bring more cattle, and the ultimate loss of the resource. In the current scenario, the common pooled resource is health. If everyone cooperates and follows the rules, everyone is better served and less likely to become sick. If people act in their own self-interests against the rules, then the resource dwindles until everyone is worsened in the end. In order to ensure the best outcome from this pandemic, a majority of people need to cooperate with the government and follow recommendations and best practices. Individuals who would prefer to, for example, travel across state borders in order to visit friends and family for holidays or ignore social distancing in order to attend a concert are choosing to feed their own cows. These actions have consequences. The more grass their cows eat—the less these people are willing to cooperate with the rest of the population—the less likely the cows are going to survive.

Health is a public issue—there is a reason the federal government has the Department of Health and Human Services, the FDA, and organizations like WHO and the CDC exist. Without large-scale public cooperation diseases like polio, chicken pox, mumps and measles, and so many others would be much more rampant today. The coronavirus is no different in regards to the necessity of collective action to combat it and help reduce the devastation it has caused.

Embry (2002) coined the term "behavioral vaccine" which are routine behaviors that are adopted to reduce the chance or prevent morbidity or mortality. Examples of these kinds of vaccines are washing hands before surgery, wearing a seatbelt, wearing a helmet on a bike, and Embry's argument for the Good Behavior Game in classrooms. Covid-19 is a disease that a vaccine has been developed for to physically and biologically fight it, but it could also benefit from behavioral vaccines as well. The adoption of routine behaviors like wearing a mask, regular sanitation of self and spaces, and social distancing can help reduce the mortality of this disease according to the CDC. However, the effectiveness of a behavioral vaccine, just like a normal vaccine, requires group cooperation to reach "herd immunity", or a point where the majority of people are vaccinated or engaged in the behavior so that those who cannot cooperate are still protected. Engaging in simpler health-related behaviors can be just as helpful to society in fighting against this disease as more extensive behaviors like getting the actual vaccine. In terms of health-related prosocial behaviors, group cooperation with behavioral vaccines are important.

TMT and Prosocial Behavior

Selfishness During the pandemic, altruism has been showcased in the media, demonstrating how during a crisis people come together and support each other; a necessity in a civil society. These acts of kindness range from paying for food for hospital staff to creating care packages and delivering them to high-risk people who cannot leave their homes to providing access to

technological resources for education. These are the more obvious kinds of prosocial behaviors that can be seen, but another major prosocial behavior exhibited during these times is following government health regulations. As previously mentioned, COVID-19 transmission reduction is reliant on large-scale collective action, so following the rules that help slow the spread of the virus can be seen as a type of behavior that helps the larger population.

Previous research on the effects of death anxiety or mortality salience on prosocial behaviors has shown that prosocial behaviors can help soothe the anxiety (Zaleskiewicz, Gasiorowska, & Kesebir, 2015). The same study also demonstrated that the person who engages in the altruistic behavior can experience psychological satisfaction, especially if the other party is deemed an ingroup member. This supports both the insulation and protection of identity and self-esteem that TMT posits helps reduce the terror of mortality salience. The context of the prosocial behavior is also important. A person is less likely to exhibit prosocial behavior if the task requires them to confront death in some way, like signing up to be an organ donor, which results in them being a so-called "self-protective altruist" (Hirschberger, Ein-Dor, & Almakias, 2008). However, there is no definitive data on how death anxiety impacts a collective action kind of prosocial behavior.

Wanting to understand how the pandemic has affected people, their behaviors, and their willingness to help and be cooperative, this study focused on the relationship between Covid-19, death anxiety, and health-related prosocial behavior cooperation. It also looked at the effect of government mandates on the willingness of people to cooperate with prosocial behaviors.

For the question, how does COVID-19 triggered death anxiety impact willingness to cooperate with health-related prosocial behavior, I hypothesized the following:

H1: Participants exposed to the COVID-19 related mortality salience stimulus will be the most willing to participate in health-related prosocial behaviors.

H2: Participants exposed to the COVID-19 related mortality salience stimulus will be more willing to comply with more restrictive government mandates.

H3: Participants exposed to the general mortality salience stimulus will be more willing to participate in health-related prosocial behaviors and more willing to comply with more restrictive government mandates than the control group, but less willing than the COVID-19 mortality salience group.

Methods

Participants

Using Mechanical Turk, 252 people responded to the study. Removing participants who did not respond to all of the questions or responded too quickly to have watched the full stimulus video and answered each question, there were 121 remaining participants. The participants were paid $2.50 each using money from the Rider University Psychology Department budget. Participants ranged in age from 19 to 69 (*M=35.34)*. Of the 121 participants, 77 identified as male, 43 identified as female, and one chose not to report their demographics. Each participant was randomly assigned to one of three groups: the General Mortality Salience (GMS) group (*n=45)*, the Covid-19 Mortality Salience (CMS) group (*n=40)*, or the Neutral Stimulus (NS) group (*n=35)*.

Stimulus Materials and Measures

For each stimulus group participants watch news footage. The GMS group watched a news clip about a winter storm that caused a major multi-vehicle accident from ABC World

News Tonight. The footage showed video of the accident and the aftermath, and the news anchors also mentioned the deaths from the accident and the storm itself. The CMS group watched a compilation of footage about Covid-19 that included a clip of a Sky News report, a clip from NBC Nightly News, and some images of mass graves from Getty images. The clips showed scenes inside of a hospital with medical staff treating patients with coronavirus, mass grave sites for those who had died, numerous coffins and mobile morgues, and reporting on the number of people who had died from the disease. The NS group viewed a news clip about alternative side of the street parking rules in New York City from PIX 11. The images were of streets, cars, street signs, and people walking on the street. It also included parts of an interview. The videos ranged in time from just under two minutes to just below three minutes. They were housed on Vimeo.

To measure the level of death anxiety experienced by participants after viewing their respective stimulus video the Death Anxiety Scale (DAS) (Templer, 1970) was used. To gauge levels of anxiety before and after watching the videos the General Anxiety Disorder 7-Item Scale (GAD-7) (Spitzer et al., 2006) was used as a repeated measure. The Cronbach's alpha ranges from .79 to .91, showing good internal consistency. The third measure was a self-constructed survey of 30 questions called the Covid-19 Recommendations and Regulations Cooperation Survey. Fifteen of the questions asked about the participants' willingness to comply with a range of health-related behaviors that are recommended by the CDC. The other 15 ask about willingness to do the same actions but if they were mandated by the government. Willingness to cooperate was measured on a 4-point Likert scale (1= Not at all willing, 4 = Completely willing). Each scale can be found in Appendices D, E, and F.

Procedures

Participants accessed the study through MTurk and were given the link to the study that was housed on PsychData. After confirming consent, participants answered the GAD-7 to measure their anxiety levels before the study. They were then randomly assigned to either the general mortality salience (GMS) group, COVID-19 mortality salience (CMS) group, or the Neutral Stimulus (NS) group and watched the video stimulus for their group. After viewing the video in full, they were asked how the video made them feel and what the video made them think about. This was to allow the participants some time to think about the images they saw and allow them to make connections, ensuring that they were engaged with the stimuli and not just passively viewing it. Next, participants responded to the GAD-7 again to measure their anxiety after watching the videos as a check for the effectiveness of the stimuli. The question was adjusted from the original, which asks, "In the past 2 weeks, how often are you bothered by the following problems?", to ask about their current emotional state. They then answered the questions from the DAS, which were followed by the Covid-19 cooperation questions. Finally, demographic questions were asked.

Results

For the 121 participants variable totals were calculated for Pre-Anxiety using the GAD-7 questionnaire given before participants viewed their videos, for Post-Anxiety using the GAD-7 questionnaire given after viewing the videos, for Death Anxiety using the DAS questionnaire given after viewing the video, and for Overall Cooperation using the Covid-19 Recommendations and Regulations Cooperation Survey. Means and standard deviations were calculated for each of these variables for each independent variable condition group (Table 1). To determine if the stimulus conditions affected anxiety levels after viewing the videos and if they experienced death anxiety, one-way ANOVAs were calculated for Death Anxiety and

Post-Anxiety (tables 2-5). There were no significant differences found between the three condition groups for death Anxiety ($F = 0.074$, p > .05). No significant differences were found for Post-Anxiety ($F(2, 118) = 0.50, p > .05$) The participants from each condition group did not differ significantly in their levels of anxiety after watching the videos. However, when a one-way ANOVA was calculated for the difference between the Pre-Anxiety and Post-Anxiety levels of each group, significant results were found ($F(2, 118) = 6.091, p < .05$). For Post Hoc testing Tukey's HSD was calculated and revealed that participants in the CMS group ($M = 2.825, sd = 4.950$) had a greater difference between their anxiety scores before and after watching the video than the NS group ($M = -0.694, sd = 3.504$) at a significant level, meaning the CMS groups scores changed the most, rising from an average anxiety level of 12.250 to 15.075. The differences between the CMS group and the GMS group ($M = 1.022, sd = 4.505$) and between the GMS and the NS group were both not significant. There were no significant differences between the stimulus groups for overall levels of cooperation either ($F(2, 118) = 2.125, p > .05$)

An exploratory factor analysis was conducted to isolate items for the Covid-19 Recommendations and Regulations Cooperation Survey. Six factors were identified. The first factor was the most robust, with a high eigenvalue of 11.288, and it accounted for 37.6% of the variance in the data. Factor two had an eigenvalue of 2.570 and accounted for a further 8.6% of the variance. The eigenvalues for factors three and four were 1.653 and 1.504 respectively, together accounting for a further 10.5% of the total variance. The fifth and sixth factors had eigenvalues of 1.180 and 1.174 and the two accounted for around 8% of the variance. Factor 1 comprised 8 questions, Factor 2 consisted of 5 questions, Factor 3 of 6 questions, Factor 4 of 4 questions, Factor 5 of 4 questions, and Factor 6 of 3 questions.

Using these factors, one-way ANOVAs were conducted for each factor to see if there were significant differences between each condition group. However, each of the six ANOVAs had nonsignificant results, showing no differences between the conditions on each factor. These results can be found in Table 8.

Discussion.

With no major significant differences found between the three condition groups, the hypotheses that the CMS groups would be more willing to cooperate with Covid-19 recommendations and regulations, including the more restrictive ones, and that the GMS groups would be more cooperative than the NS group but less than the CMS group were not supported. However, while there were no significant differences found, the results did show the groups trending in the directions that were hypothesized. Looking at the means for each condition for each factor from the EFA, the CMS group had slightly higher means for Factors 1, 2, 4, and 6. On Factors 3 and 5 they were just slightly under the scores of the NS group. The trend of the Covid-19 group having higher scores suggested more willingness to cooperate with the recommendations than the other two groups. The greater increase in anxiety levels after watching the video seen in the CMS group over the GMS and the NS groups demonstrated that there was an effect from watching the videos, but not an increase in death anxiety.

Several possibilities explain these results. One, the DAS used to measure death anxiety was not a strong enough measure to accurately assess the level of death anxiety experienced by the participants in the moment rather than generally. Two, the video stimuli were not strong enough to induce death anxiety. However, the written responses to how the videos made people think and feel showed the majority of those who viewed the CMS video did express fear and concern about the virus, and the anxiety results suggest there was some effect on the viewers'

emotional states. Three, due to the pandemic, everyone has been constantly exposed to mortality salience stimuli and experiencing higher than normal levels of death anxiety. This would explain both the levels of death anxiety experienced by the NS group and the lack of difference between groups.

Looking at the aggregate of responses to the Covid-19 Recommendations and Regulations Cooperation questions, the majority of people were willing to cooperate and engage in these prosocial behaviors. Some of the more restrictive or excessive actions, like signing up for the vaccine, getting it every year like a flu shot, and engaging or allowing contact tracing, showed lower levels of willingness. Generally, though, the inclusion of the government mandate for those behaviors showed slightly higher averages than without it. When the government asks people to do something, with the unspoken threat of punishment if not followed, people might be more likely to cooperate, up to a point though.

Further research would benefit from focusing more on the attitudes and emotional states of the participants at a baseline level and then after being exposed to the mortality salience stimuli for a better comparison. Because people probably had already established opinions on Covid-19 mandates and attitudes towards the government, it was difficult to determine if the participants' willingness to cooperate was affected by the stimuli and their emotional states or if these beliefs were already too strongly held to be changed. Conducting psychometrics to better the cooperation survey and strengthen it as a measure would be helpful in this regard. It also would serve to look further into the TMT effect of people turning more inwards and more strongly holding onto their own beliefs. Expanding the research to see if the ways information about health-related recommendations and regulations are communicated to people (through social media, the news, reading a government website, etc.) affects people's willingness to

cooperate too could be useful to the larger conversation of social cooperation. Looking at how death anxiety for the self versus others (friends, family, and strangers) could potentially have interesting results as well. However, the biggest recommendation for future research on this topic is to repeat it when the pandemic is over or after it has gone on for a longer period of time. The societal effects on death anxiety at this stage may be causing them to be too high or the participants to be too numb and unaffected by seeing something they already see every day. Results may be more conclusive the further in time it gets away from the actual event.

Conclusion

The ultimate goal of this study was to understand how people behave during the pandemic in hopes of being able to recommend better ways for the government, who are tasked with solving a public health crisis, to approach the solutions. The results of this study suggest that reminding people of their own death may have some effect on their willingness to cooperate, but the effects are not great enough to use the high stakes of not cooperating as persuasive means. Instead, it may be more advantageous to help relieve death anxiety and focus on the benefits of societal cooperation, like getting back to normalcy as a result of cooperation.

To solve any societal issue collective action is necessary. Mandates are effective, but there are social costs to using coercive force to encourage cooperation. Especially in the US, personal liberty and freedom are paramount to the American identity, so trying to force cooperation by removing certain personal choices through extensive government requirements is not going to effectively get full cooperation from hundreds of millions of people. Most people are willing to cooperate up until it interferes with their own beliefs and interests. Going back to the "Tragedy of the Commons" metaphor, everyone is fine with just bringing one cow to graze in the commons, until someone brings more than one, and personal interests overtake the

prioritization of the whole community. The answer may be to encourage collective action prosocial behavior as personally relevant. Wearing a mask and social distancing protects the individual, but also other people. Getting tested increases an individual's knowledge of their health, but also allows them to make decisions that benefit others. Getting a vaccine protects against the virus for the individual, but it also adds to herd immunity.

This is why approaching behavioral cooperation as a behavioral vaccine offers an interesting and potentially effective approach to this issue. Once it has been established that certain actions benefit the person and they are more willing to cooperate, the next step is getting them to actually act in that way. Setting Covid-19 behaviors as routine not only are more effective in helping slow and stop the virus, but make it more likely for cooperation to happen. Already people are generally more willing to wear masks a year later because it has become routine. Applying similar tactics with the vaccine, like a routine part of life, may serve to increase cooperation. Add some government or institutional mandates and focus on the personal benefits of the behavior, like removing the aversiveness of death anxiety, and cooperation may reach the threshold for collective action. Of course, there are no guarantees, but looking for new ways to approach a public health crisis through different behavioral approaches and with insight into social behavior during the pandemic gives the government and all those working towards ending the pandemic a better shot of reaching their goals.

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Table 1

Means and Standard Deviations

Condition		DeathAnxiety	PreAnxiety	PostAnxiety	Difference	Cooperation
1	Mean	21.2222	15.2889	16.3111	1.0222	111.6667
	Std. Deviation	3.30213	5.35394	5.79899	4.50499	25.42368
2	Mean	21.1500	12.2500	15.0750	2.8250	122.0250
	Std. Deviation	3.46077	5.12785	5.98454	4.95046	23.50394
3	Mean	20.9444	16.6389	15.9444	-.6944	117.5278
	Std. Deviation	3.09787	5.48324	5.40869	3.50363	19.84293
Total	Mean	21.1157	14.6860	15.7934	1.1074	116.8347
	Std. Deviation	3.27157	5.57529	5.72555	4.57676	23.46321

Table 2

Comparison of Means Between Condition Groups for Death Anxiety

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.613	2	.807	.074	.929
Within Groups	1282.767	118	10.871		
Total	1284.380	120			

Table 3

Comparison of Means Between Condition Groups for Pre-Anxiety

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	391.016	2	195.508	6.909	.001
Within Groups	3339.050	118	28.297		
Total	3730.066	120			

Table 4

Comparison of Means Between Condition Groups for Post-Anxiety

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	33.526	2	16.763	.507	.604
Within Groups	3900.308	118	33.053		
Total	3933.835	120			

Table 5

Comparison of Means Between Condition Groups for Difference Between Pre- and Post-Anxiety

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	235.212	2	117.606	6.091	.003
Within Groups	2278.392	118	19.308		
Total	2513.603	120			

Table 6

Comparison of Means Between Condition Groups for Overall Cooperation

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2296.747	2	1148.373	2.125	.124
Within Groups	63765.947	118	540.389		
Total	66062.694	120			

Table 7

Variances for EFA Components

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	11.288	37.626	37.626	11.288	37.626	37.626	4.578	15.260	15.260
2	2.570	8.568	46.194	2.570	8.568	46.194	3.364	11.212	26.472
3	1.653	5.510	51.704	1.653	5.510	51.704	3.331	11.103	37.575
4	1.504	5.012	56.716	1.504	5.012	56.716	2.782	9.273	46.847
5	1.180	3.935	60.651	1.180	3.935	60.651	2.776	9.254	56.102
6	1.174	3.914	64.565	1.174	3.914	64.565	2.539	8.463	64.565

Table 8

Comparison of Means Between Condition Groups for Cooperation Survey Components

		Sum of Squares	df	Mean Square	F	Sig.
Component1	Between Groups	97.136	2	48.568	.968	.383
	Within Groups	5918.864	118	50.160		
	Total	6016.000	120			
Component2	Between Groups	108.755	2	54.377	2.396	.095
	Within Groups	2677.658	118	22.692		
	Total	2786.413	120			
Component3	Between Groups	114.692	2	57.346	1.430	.243
	Within Groups	4732.547	118	40.106		
	Total	4847.240	120			
Component4	Between Groups	57.351	2	28.675	1.439	.241
	Within Groups	2351.244	118	19.926		
	Total	2408.595	120			
Component5	Between Groups	27.856	2	13.928	1.001	.371
	Within Groups	1642.375	118	13.918		
	Total	1670.231	120			
Component6	Between Groups	46.807	2	23.404	2.488	.087
	Within Groups	1109.969	118	9.407		
	Total	1156.777	120			

Appendix A

General Anxiety Disorder-7 (Spitzer et al, 2006)

Over the last 2 weeks, how often have you been bothered by the following problems?

1.Feeling nervous, anxious, or on edge

2.Not being able to stop or control worrying

3.Worrying too much about different things

4.Trouble relaxing

5.Being so restless that it is hard to sit still

6.Becoming easily annoyed or irritable

7.Feeling afraid, as if something awful might happen

Appendix B

Revised General Anxiety Disorder-7

To what extent are you currently feeling the following?

1.Feeling nervous, anxious, or on edge

2.Not being able to stop or control worrying

3.Worrying too much about different things

4.Trouble relaxing

5.Being so restless that it is hard to sit still

6.Becoming easily annoyed or irritable

7.Feeling afraid, as if something awful might happen

Appendix C

Death Anxiety Scale (Templer, 1970)

For each of the following, answer whether it is true or false for you

1. I am very much afraid to die.

2. The thought of death seldom enters my mind. *

3. It doesn't make me nervous when people talk about death.

4. I dread to think about having to have an operation. *

5. I am not at all afraid to die. *

6. I am not particularly afraid of getting cancer *

7. The thought of death never bothers me. *

8. I am often distressed by the way time flies so very rapidly.

9. I fear dying a painful death.

10. The subject of life after death troubles me greatly.

11. I am really scared of having a heart attack.

12. I often think about how short life really is.

13. I shudder when I hear people talking about a World War III.

14. The sight of a dead body is horrifying to me.

15. I feel that the future holds nothing for me to fear *

* reverse scored items

Appendix D

Covid-19 Recommendations and Regulations Cooperation Survey

The CDC has offered guidelines on what individuals can do to help slow and stop the spread of the coronavirus or COVID-19. The following questions have been based on those guidelines and other public health suggestions. For each of the following, rate your willingness to comply with each action.

1. Wearing a mask inside a public building (i.e., a store, school, hospital, office)

2. Wearing a mask inside a public building, if the government mandated it

3. Wearing a mask outside around other people

4. Wearing a mask outside around other people, if the government mandated it

5. Maintaining social distance (6 ft) between other people

6. Maintaining social distance (6ft) between other people, if the government mandated it

7. Work remotely (if possible)

8. Work remotely, if the government mandated it

9. Not leaving the home except for essential work, grocery shopping, and medical needs

10. Not leaving the home except for essential work, grocery shopping, and medical needs, if the government mandated it

11. Quarantining for 2 weeks after traveling out of state/country

12. Quarantining for 2 weeks after traveling out of state/country, if the government mandated it

13. Getting a COVID-19 test before traveling out of state/country

14. Getting a COVID-19 test before traveling out of state/country, if the government mandated it

15. Getting a COVID-19 test after traveling out of state/country

16. Getting a COVID-19 test after traveling out of state/country, if the government mandated it

17. Getting a COVID-19 test when experiencing COVID-19 symptoms

18. Getting a COVID-19 test when experiencing COVID-19 symptoms, if the government mandated it

19. Routinely getting a COVID-19 test at least every month

20. Routinely getting a COVID-19 test at least every month, if the government mandated it

21. Signing up for the COVID-19 vaccine

22. Signing up for the COVID-19 vaccine, if the government mandated it

23. Getting the COVID-19 vaccine

24. Getting the COVID-19 vaccine, if the government mandated it

25. Getting a COVID-19 vaccine every year like a flu shot

26. Getting a COVID-19 vaccine every year like a flu shot, if the government mandated it

27. Participating in self-reported electronic contact tracing

28. Participating in self-reported electronic contact tracing, if the government mandated it

29. Allow your movements to be traced by a company or the government for contact tracing (via social media, cell phone data, public surveillance, etc.)

30. Allow your movements to be traced by a company or the government for contact tracing (via social media, cell phone data, public surveillance, etc.), if the government mandated it

Appendix E

Stimulus Videos

General Mortality Salience stimulus https://vimeo.com/526117177

Covid-19 Mortality Salience stimulus https://vimeo.com/526101665

Neutral stimulus https://vimeo.com/526106845