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COVID-19's Effects on Mortality Salience, Death Anxiety, and Worldview Defense

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COVID-19's Effects on Mortality Salience, Death Anxiety, and Worldview Defense

By

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Presented to the Faculty of the Graduate School of

Stephen F. Austin State University

In Partial Fulfillment

Of the Requirements

For the Degree of

Master of Arts in General Psychology

STEPHEN F. AUSTIN STATE UNIVERSITY

May, 2022

COVID-19's Effects on Mortality Salience, Death Anxiety, and Worldview Defense

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ABSTRACT

Since late-2019, the world has been trying to overcome an invisible killer: COVID-19. With near constant reminders of the virus the knowledge that a tiny viral particle has potential to harm or even kill has become overwhelming for many. Terror Management Theory (TMT) suggests that when individuals are reminded of their own death people take part in culturally appropriate activities and defend their own culture as ways to alleviate this increased death anxiety. The current study aims to identify whether 1) reminders of COVID-19 prime death thoughts, 2) reminders of COVID-19 increase death anxiety, and 3) increased death anxiety from COVID-19 reminders also increase worldview defense. The results have provided evidence that thinking about COVID-19 does not prime death anxiety reducing behaviors.

Acknowledgements

I would first like to thank Dr. Brewer for all that she has done for me over the years. She has pushed me to be involved in the overlap program and then the graduate program, because she has always believed in me, even when I do not believe in myself. I appreciate all the long days and weekends spent with me in meetings going over just this project. Thank you for the countless emails of clarification and motivation that kept me on the track of success. I truly mean it when I say I would not be here without you, and so I thank you for being here and being you.

I would also like to thank my committee. This semester was extremely challenging with getting approval from the IRB and then collecting data. But, alas, it has been finished. I thank the committee for all of the support, understanding, and grace allowed by them to me for the completion of this project.

Lastly, I would like to give a special thanks to Dr. Cecil and Dr. Hart for letting me pester their classes to participate in this survey. I would not have been able to collect as much data as I did without that opportunity, so thank you all for it.

-Sahvannah Shavers

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COVID-19's Effects on Mortality Salience, Death Anxiety, and Worldview Defense

Since March 2020, the world has suffered at the hands of an invisible killer: SARS-CoV-2, commonly known as COVID-19. The respiratory virus has taken 988,000+ American lives as of April 20th, 2022 (WHO, 2022), more than the number of American soldiers killed in World War 2 (Department of Veteran Affairs, 2021). In addition to the seemingly omnipresent death due to COVID-19, individuals continue to face financial, emotional, and environmental changes (e.g., reduced staffing due to reduced profits, inability to see loved ones, and bringing work, school, and home life into the same physical space). To protect people, businesses that could operate from a safe distance did so, and students in schools from kindergarten to graduate programs had their educational training moved online. All other businesses that were not deemed essential (e.g., restaurants, retail locations, entertainment venues) were asked to reduce their customer capacity limits or close their doors completely to ensure the safety of staff and customers. The strain on this new and quite isolated world has affected the mental health of large portions of the population including for those in low-income geographical areas, school-aged children, and single adults living alone (Bendau et al., 2020). For many, COVID-19 has served as a vivid reminder that humans are actually very vulnerable to the elements, predators, and pathogens.

More than a year after the first COVID-19 death was reported in China (WHO, 2020), individuals are still living in a pandemic world in which face masks are displayed at checkout counters alongside candy bars (Washington Post, 2021). No matter where one turns – in both physical and digital spaces - there are near-constant reminders that tiny viral particles could be the cause of one’s own mortality. Considerable research (Gailliot, Schmeichel, & Baumeister, 2006; Gailliot, Schmeichel, & Maner, 2006; Gailliot, Stillman, Schmeichel, Maner, & Plant, 2008; Greenberg, Pyszczynski, & Solomon, 1986; Greenberg, Pyszczynski, Solomon, Somin, & Breus, 1994; Pyszczynski, Greenberg, & Solomon, 1999; Rosenblatt, Greenberg, Solomon, Pyszczynski, & Lyon, 1989; Hayes, Schimel, Arndt, & Faucher, 2010) has shown that thinking about reminders of death (i.e., mortality salience) cause people to think about their own mortality, which causes a host of psychological and behavioral consequences.

Terror Management Theory (TMT)

The finality and uncertainty about death is scary for most people (Greenberg et al., 1986), but these things are especially frightening when people think about their own death (Greenberg et al. 1986; Greenberg et al., 199; Greenberg et al., 1989; Rosenblatt et al., 1989). Instead of continuously worrying about a death that cannot be outrun, humans have developed a solution that helps dilute the anxiety of their impending demise. Terror Management Theory (TMT) offers an explanation to help understand why and how humans deal with the idea, thoughts, and awareness of their ultimate deaths (Greenberg et al. 1986). Some evidence suggests that individuals develop a strong relationship with

their culture in order to make sense of the natural world and reality in which they must live (Greenberg et al. 1986; Greenberg et al., 1994; Rosenblatt et al., 1989). The ability to connect with a culture or group of people gives the individual a sense of importance and purpose so that they may feel there is order and reason to the events that take place around them (Greenberg et al. 1986).

Starting with Rosenblatt and colleagues (1989), research has focused on experimentally manipulating thoughts of death. This is most popularly achieved by asking participants to answer open-ended questions that will have them think and write about the emotions they experience when thinking about their own death and what will physically happen to them as they die (Abeyta et al., 2014; Galliot et al., 2006; Greenberg et al., 1994; Greenberg, Simon, Pyszczynski, Solomon, & Chatel, 1992; Hayes et al., 2014; Rosenblatt et al., Routledge et al., 2010). By using this process researchers have been able to successfully induce mortality salience, by priming thoughts related to death (Rosenblatt et al., 1989). Once mortality salience had been achieved, participants are often tasked with watching a television program or reading an anti-cultural essay in which they may employ defensive responses to the messages (Greenberg et al., 1992; Hayes et al., 2010). According to the mortality salience hypothesis, individuals that have been reminded about their mortality will have a stronger need for self-esteem and faith in their cultural worldviews, which leads to a defensive response when under threat (Hayes et al., 2010; Rosenblatt et al., 1989; Routledge et al., 2010).

One's own cultural worldview is developed to provide a buffer against mortality salience. The rules (e.g., municipal, criminal, religious, and social laws) that are set in place should, if the individual is aligned with their culture, give a psychological buffer for individuals who are faced with their own mortality. These buffers also provide what is seen as symbolic immortality. Symbolic immortality (Becker, 1973; Greenberg et al., 1986; Koc & Kafa, 2014) can be thought of as the pinnacle of being in that the individual will never die because they are a part of something that is larger than themselves and will remain long after their own death (e.g., soldiers sacrificing their lives for their country in hopes of a victory).

TMT takes into consideration the human and its relationship with the culture from which it comes. Becker (1973), a cultural anthropologist, argued that humans are unique, compared to animals, in that they have conscious awareness (Becker, 1973). He also argued that this awareness can be problematic because humans, unlike other animals, are able to hold value in symbols, artifacts, and history of cultures to help promote both public and private self-images (Becker, 1973). This awareness also lends itself to helping humans know and understand how vulnerable they are to mortality and ultimately leads to an impending knowledge of, and anxiety about, death (Becker, 1973). In other words, animals know they must live, but humans know they will eventually die. To combat this, humans look to preserve their self-esteem through cultural acceptance. Therefore, by pairing the need for self-esteem and cultural views, individuals are able to maintain and buffer their death anxiety.

The Importance of Self-esteem in Relation to TMT

Much of TMT research has suggested that there is a general need for the self-esteem that humans possess (Galliot et al., 2006; Galliot et al., 2008; Greenberg et al. 1986; Greenberg et al., 1994; Hayes et al., 2010; Pyszczynski et al., 1999; Rosenblatt et al., 1989). The need for self-esteem comes from the desire to self-preserve and is sought for protection when under threat. Mechanisms like self-serving bias and cognitive dissonance have been shown to be affected by levels of self-esteem (Frey, 1978). Greenberg and Pyszczynski (1985) found that in the face of both private and public failure, individuals engaged in private self-maintenance strategies to repair their injured self-esteem. When threatened by public or personal failures, individuals may falsely report scores to protect their self-esteem and self-image (Dunning, Johnson, Ehrlinger, & Kruger, 2003; Frey, 1978). Self-esteem has been described as an anxiety buffer that is developed in children and transfers from parents to culture as children outgrow the comfort provided to them by their caregivers (Greenberg et al. 1986). Taken together, maintaining high-levels of self-esteem is important for serving many functions, not the least of which is that self-esteem helps reduce death anxiety.

Culture

In TMT, culture is a primary source from which individuals can draw purpose and meaning to understand what reality, morals, and appropriate actions should be taken in daily life (Greenberg et al. 1986). Culture consists of religion, symbols, politics, and ingroup experiences that give an individual an answer to their existential questions of

‘why’ (Greenberg et al. 1986). Markus and Kitayama (1991) argued that, through one's own cultural views, humans are better able to understand the behavior of others. They also suggested that culture should be included in the theoretical background when trying to explain human behaviors because of how each culture helps sculpt the self of those within it (Markus & Kitayama, 1991). In short, culture provides people with a reality in which to exist and then creates a belief of importance within that reality.

Worldview Defense

Worldview defense can be explained as the need to preserve the context or culture that brings order and meaning to the human by giving answers to large, existential questions (Greenberg, Pyszczynski, Solomon, Rosenblatt, Veeder, Kirkland, & Lyon, 1990). Through this context, individuals are able to establish a sense of self-esteem and gain a connection to the immortality of the culture that is thought to be able to live on forever. Further, people will seek to defend these beliefs when under threat (Greenberg et al. 1986; Greenberg et al., 1990). Rosenblatt and colleagues (1989) found that, when setting bond for prostitutes, American court judges, whose mortality had been made salient set higher bonds than judges whose mortality had not been made salient. In the same study, researchers were able to determine that the bonds were harsher if the judges were reminded of their mortality salience and also reported a relatively negative attitude towards prostitution. Because prostitution is illegal in the United States, (i.e., it goes against what is generally socially accepted), a judge (or any other American) might defend their cultural worldview by harshly punishing the prostitute. These findings

support the notion that individuals defend their worldviews in the face of their own mortality. Similarly, results from another set of studies (Arndt, Greenberg, Pyszczynski, & Solomon, 1997) suggested that those who were aware of their own mortality gave more favorable evaluations of someone who bolstered their cultural worldview and more unfavorable evaluations to those who were critical of their cultural worldview. These findings demonstrate the self-preservation mechanism that humans have established to protect themselves from mortality salience by castigating those who do not follow cultural norms or who are critical of their culture (Greenberg et al. 1986).

Mortality Salience

Using the TMT framework, Greenberg, Pyszczynski, and Solomon (1986) have defined mortality salience as the awareness of one's own mortality, either consciously or unconsciously. For more than a quarter of a century, mortality salience has been shown reliably to increase death anxiety (Greenberg et al., 1986; Greenberg et al., 1990; Rosenblatt et al., 1989). Greenberg and colleagues (1994) provided evidence that mortality salience causes the psychological and emotional arousal that death thoughts bring. The findings from these four studies concluded that individuals who were reminded of their own death displayed prejudice, nationalism, and intergroup bias (Greenberg et al., 1994). They also found evidence that mortality salience may be most effective at producing such results when brought subtly into conscious awareness (Greenberg et al., 1994).

Additionally, Rosenblatt and colleagues (1989) demonstrated in six studies that, when mortality was made salient, individuals elected harsher punishment to persons who violated their morals (i.e., judges passing sentences on prostitutes) and gave greater rewards to those who upheld cultural values (i.e., two strangers wearing gear that supports the same sports team). To further these investigations, Greenberg and colleagues (1990) found that Christian participants, who were reminded of their mortality, gave higher-rated evaluations to Christian targets and lower-rated evaluations to Jewish persons (Greenberg et al., 1990). Participants in the mortality salience condition also rated those who upheld the participants' cultural views more positively and rated the target more negatively if they did not share the same cultural views (Greenberg et al., 1990).

The evidence from the TMT literature suggests that mortality salience has a large influence on humans and their behavior; it leads to an increase in death-anxiety, which is then buffered by the self-esteem that was maintained through appropriate cultural engagement (Greenberg et al., 1986). In other words, TMT suggests that people routinely experience mortality salience (e.g., reading obituaries in the newspaper, seeing GoFundMe accounts for bereaved families, passing by a car accident), which increases their death anxiety. To reduce this anxiety, people engage in culturally ascribed behaviors (e.g., belonging to a religion, getting a job and/or an education, having children), which increases their self-esteem and thus returns them to their pre-mortality salience state.

COVID-19 Related Mortality Salience

Much research examining the effects of the COVID-19 pandemic on psychological distress is emerging (Bendu et al., 2020; Lopez-Castro, Brandt, Anthonipillai, Espinosa, & Melara, 2021; Pyszczynski, Lockett, Greenberg, & Solomon, 2021; Sanchez & Dunning, 2020). Researchers in New York City (NYC), a once-global epicenter for the pandemic, found that students within the NYC geographical area reported high levels of depression and anxiety related to the lack of home/work life balance, environmental, and mental/physical health challenges brought on by COVID-19 (Lopez-Castro et al., 2021). This study also reported that individuals who had experienced the loss of family or friends due to the COVID-19 virus mentally suffer significantly more than those who had not experienced such a loss (Lopez-Castro et al., 2021). Bendu and colleagues (2020) also found that media consumption may have been a significant source of this newly found pandemic anxiety (Bendu et al., 2020).

Pyszczynski and colleagues (2021) focused on how individuals may be influenced by the near-constant reminders of a very deadly and easily transmitted disease, and how these reminders could be resulting in the wide range of psychological and behavioral reactions. The purpose of the current study was to test the hypothesis that the near-constant reminders of COVID-19 prime mortality salience, increase death anxiety, and would lead to worldview defense.

The Current Study

The year 2020 was highlighted by the contagion of a deadly virus. Worldwide, people were routinely reminded to stay home when possible, wear a mask and wash hands when out, and physically distance from others. These near-constant reminders of the lethality of COVID-19 likely primed mortality salience. According to TMT, these reminders should then increase people's death anxiety, and to decrease the anxiety, people should then become especially defensive of their own worldview as a way to regain their culturally-tied self-esteem. This study aimed to replicate and extend classic TMT work. Specifically, this purpose of this study was to test the hypotheses that thinking about COVID-19 functions similarly to other death thoughts in that it 1) primed mortality salience (as measured by death-thought accessibility), 2) increased death anxiety, and 3) increased worldview defense relative to thinking about an unpleasant but not deadly control topic (i.e., dental pain).

Method

Participants

Participants were recruited from Stephen F. Austin State University's undergraduate psychology, anthropology, and mass communication departments (N=103). Data were collected using convenience sampling. Students signed-up to participate in this study via Sona Systems, an online study participation platform, and received partial course credit or extra credit for participation in the study. From start to finish the study took approximate 45 minutes. Participants' age and race demographics were as follows: 28.2% Cis men, 66% Cis Women, 3.8% Non-binary, and 1.9% prefer not to say, 2.8% American Indian/ Alaska Native, .9% Asian, 1.9% Native Hawaiian or other pacific islander, 14.6% African American, 74.8% White, 3.9% more than one race, and .9% not reported. Along with the identification of race, the participants were also asked to identify their ethnicity. The sample contained 15.1% Hispanic and 81.1% Non-Hispanic participants. The age for participants ranged from 18 to 51 years with a mean age of 20.8. Participants who were classified as international students, under the age of 18, or as not having normal or corrected-to-normal vision were excluded from the sample.

Materials

Mortality Salience and COVID-19 Manipulation. This study employed a three-group design. Participants were randomly assigned to think about their own death (standard TMT death manipulation condition), dental pain (standard TMT unpleasant control condition), or COVID-19 (additional experimental manipulation condition created for this study to test the hypothesis that viewing images related to COVID-19 does enact mortality salience). In order to bolster the manipulations (Gailliot, Schmeichel, & Maner, 2006; Greenberg et al., 1994), picture arrays depicting death, dental pain, and COVID-19 were created (see Appendix B.1, B.2, & B.3). Each picture array consisted of six photos pulled from various image searches on Google using the terms “Death,” “Dental Pain,” and “COVID-19” for the death, dental pain, and COVID-19 conditions, respectively.

After viewing these pictures for one minute, participants were asked to spend five minutes typing their answers to the following questions: “What would happen to you as you physically [die/experience dental pain/suffer from COVID-19]?”, and “What emotions do the thoughts of [your own death/your own dental pain/your own suffering from COVID-19] arouse in you” (Abeyta et al., 2014; Bargh & Chartrand, 2000; Greenberg et al., 1994; Greenberg, Simon, Pyszczynski, Solomon, & Chatel, 1992; Hayes et al., 2014; Routledge et al., 2010; Rosenblatt et al., 1989). Participants’ pictures and writing prompts matched; for instance, participants who saw the death-related pictures wrote about what would physically happen to them as they physically die and what

emotions the thought of their own death aroused in them (see Appendix B.1, B.2, B.3).

This measure served as the manipulated independent variable.

Mortality Salience Manipulation Check. In order to determine whether participants correctly encoded the content of the manipulation, they were asked the following: What was the theme of the photos you viewed? Participants were provided with all three answer options - death, dental pain, and COVID-19. (see Appendix F).

Death-Thought Accessibility Word Stem Completion Task. To measure mortality salience, participants completed the death-thought accessibility word stem task (Hayes, et. al., 2010). Participants were presented with 20-word fragments (e.g., C O F F _ _) and asked to fill in the missing letter(s) to complete the word. Notably, there were six target words that could be completed with death-related words (e.g., C O F F _ _ could be completed as COFFEE [non-death-related word] or COFFIN [death-related word]). After completion of this task, the researcher counted the number of these six target words that were completed with death-related options. Higher scores equaled greater mortality salience (see Appendix C). This measure served as the first dependent measure.

Death Anxiety Inventory. The Death Anxiety Inventory was included to measure the Death Anxiety (Tomás-Sábado, & Gómez-Benito, 2005) dependent variable. This scale was a 20-item scale with sample items including “The certainty of death makes life meaningless” and “Getting old worries me.” Response options ranged from 1 (*total disagreement*) to 5 (*total agreement*). All items were positive indicators of death anxiety, so all items were averaged to create a single scale score (see Appendix D).

Trait Self-Control Scale. This scale was designed to measure trait levels of self-control (Tangney, Baumeister, & Boone, 2004). It was composed of 13 Likert-type items. Sample items included “I am good at resisting temptation” and “I am able to work effectively toward long-term goals.” Response options ranged from 1 (*Not very much*) to 5 (*Very much*). Items were reverse coded as necessary and then averaged to compute a single, composite score. Higher scores equaled more trait self-control (see Appendix E). This measure was included to enhance the cover story as well as a to serve as a potential co-variate.

Worldview Defense. The purpose of this measure was to assess participants’ attitudes towards the ostensible writer of an anti-American essay. The Worldview Defense measure was developed by Greenberg and colleagues (1992) and consisted of an anti-American essay that appeared to have been written by a foreign exchange student. After reading this essay, participants were asked to respond to a series of questions about the essay-writer. This questionnaire consisted of five Likert-type questions (e.g., “How much did you agree with this person’s opinion of America?”) that were answered on a nine-point scale with answers ranging from 1 (*not at all*) to 9 (*totally*). Items were averaged together to create a single, composite score. Higher scores will indicate that the participant favors the writer (i.e., the participant will exhibit less worldview defense). This measure, which has been used extensively in extant literature (Greenberg et al., 1990; Greenberg et al., 1994; Rosenblatt et al., 1989), served as the third dependent measure (see Appendix G).

Brief Mood Introspection Scale. The Brief Mood Introspection Scale (BMIS; Mayer & Gaschke, 1988) was used to measure participants' overall mood. The BMIS was a 16-item Likert-type scale. Participants were presented with single-word descriptions of mood-related feelings (e.g., happy, grouchy, active) and asked to rate how much each of those feelings was true for them in that present moment. Response options ranged from 1 (*definitely do not feel*) to 7 (*definitely feel*). Necessary items were reverse coded and averaged to create a single scale score. Higher scores indicated greater presence of a positive mood (see Appendix H). This measure was included to enhance the cover story as well as a potential co-variate.

State Self-Control Capacity Scale. The State Self-Control Capacity Scale (Ciarocco, 2012) measured state self-control. This scale consisted of 24 items (i.e., "If I were given a difficult task right now, I would give up easily" and "I can't absorb any more information. "). Responses were given using a 7-point Likert-type scale with options ranging from 1 (*Not True*) to 7 (*True*). Items were reverse coded when necessary and averaged to create a single score. Higher scores were indicative of greater state self-control (see Appendix I). This measure was included to enhance the cover story as well as a potential co-variate.

Ten-Item Personality Inventory. The ten-item personality inventory (TIPI; Gosling, Rentfrow, & Swann, 2003) was used to assess participants' Big-Five personality traits (Atherton, Sutin, Terracciano, & Robins, 2021; Eck & Gebauer, 2021; Kohut, Veronika, & Halama, 2021). The TIPI consisted of ten items (i.e., "Extraverted,

enthusiastic” and “Critical, quarrelsome”) answered by participants using a scale ranging from 1 (*Strongly Disagree*) to 5 (*Strongly Agree*). The items were reverse scored when necessary, and individual composite scores were created for each of the Big Five personality dimensions (i.e., Extraversion Agreeableness, Conscientiousness, Emotional Stability, Openness to Experiences). Higher numbers were indicative of more of the trait (see Appendix J). This measure was included to enhance the cover story as well as a potential co-variate.

Rosenberg Self-Esteem Scale. The Rosenberg self-esteem scale (RSES; Rosenberg, 1979) was included to measure participants’ self-esteem. This scale was a 10-item Likert-type scale consisting of items such as, “I am able to do things as well as most people”, and “I wish I could have more respect for myself.” Response options ranged from 1 (*Strongly Disagree*) to 5 (*Strongly Agree*). Items were reversed scored, as necessary, and averaged to compute a composite score. Higher scores indicated greater self-esteem (see Appendix K).

Belief in a Just World. The Belief in a Just World Scale (Dalbert, 1999) was a six-item scale with sample items like “I am confident that justice always prevails over injustice,” and “I believe that, by and large, people get what they deserve.” Participants responded using a five-point scale ranging from 1 (*disagree*) to 5 (*agree*). Items were averaged to create a composite score. Higher score indicated greater belief in a just world (see Appendix L).

Procedure

The study was presented to participants as two ostensibly separate studies to mask the hypothesis and true nature of the study. The first part of the study was titled “Visual Perception and Word Recognition.” Participants were told that this first ostensible study involved them looking at an array of photos and then completing a word recognition task followed by a few questionnaires. Participants first confirmed they were over the age of 18 and then provided informed consent. Unbeknownst to them, participants were then randomly assigned to one of the three conditions—Death Dental Pain, or COVID-19—and presented with a set of six pictures. Participants were then told to review an array of pictures for one minute and to spend the next five minutes answering questions that involve their feelings towards death, dental pain, or COVID-19, respectively. Participants then completed a manipulation check in the form of a single question: What was the theme of the pictures you saw earlier in this study? Upon completion of this experimental manipulation, participants then were asked to fill out the death-though accessibility word stem task (Hayes et al., 2010), which measured mortality salience. After this task, participants completed the Death Anxiety Inventory (Tomás-Sábado, & Gómez-Benito, 2005) and the Trait Self-Control Scale (Tangney et al., 2004).

The second ostensible study was titled “Social Judgement and Personality,” and this study required participants to read a short passage and complete several additional questionnaires. After providing informed consent, participants read an essay with obvious anti-American themes that appeared to have been written by a foreign-exchange student. After reading the essay, participants were asked to record how they felt about the author

by completing a five-item questionnaire that asked how the participant viewed, accepted, and like the writer of the presented essay. Their responses served as the primary measure of worldview defense (Arndt et al. 1997; Courtney, Felig, & Goldenberg, 2021). Participants then completed the Brief Mood Introspection Scale (Mayer & Gaschke, 1988), the Ten-Item Personality Inventory (Gosling et. al., 2003), the Rosenberg Self-Esteem Scale (Rosenberg, 1979), and the Belief in a Just World Scale (Dalbert, 1999). These scales were added to enhance the cover story and to measure potential covariates. After completing a demographics survey, participants were thanked, fully debriefed, and asked to re-consent to the study due to the deception inherent in the design.

Results

Manipulation Check. The present study employed a three-groups design with a manipulated independent variable condition, (i.e., death, dental pain, and COVID-19 conditions) and three measured dependent variables (mortality salience, death anxiety, and worldview defense). To confirm that participants remembered the theme of the pictures they saw, a 3 x 3 Chi-square analysis was conducted with manipulation condition as the row variable and response to the manipulation check item (i.e., “What was the theme of the picture you viewed?”, with Death, Dental Pain, or COVID-19 as answer options) as the column variable. The results of the 3 x 3 Chi-square were statistically significant for all relationships ($p < .001$). Additionally, the post-hoc tests (with a Bonferroni correction applied), confirmed results that participants 100% accurately recalled their correct condition (i.e., Death, Dental Pain, COVID-19).

Effects on Mortality Salience. To test the hypothesis that COVID-19 would increase mortality salience, a one-way Analysis of Variance (ANOVA) was performed with condition (i.e., Death, Dental Pain, COVID-19) as the independent variable and death-thought accessibility (i.e., number of word stems completed with a death-related word) as the dependent variable. The omnibus test of the one-way ANOVA revealed that there were no statistically significant differences between conditions on death-thought

accessibility, $F(2, 99) = .834, p = .437$. Because of this, post-hoc tests were not performed.

Effects on Death Anxiety. To test the hypothesis that COVID-19 would increase death anxiety, a second one-way ANOVA was performed with condition (i.e., Death, Dental Pain, COVID-19) as the independent variable and death anxiety score as the dependent variable. The omnibus test of the one-way ANOVA revealed that there was at least one statistically significant difference among groups, $F(2, 93) = 3.818, p = .025$. Additionally, the Bonferroni post-hoc multiple comparisons test found statistically significant mean differences in death anxiety between the COVID-19 and dental pain conditions $F(2,49) = 1.954, p = .053$. Significant differences in death anxiety were not found between the death and COVID-19 conditions as predicated ($p = .073$). Additionally, unlike previous work, there was no statistically significant differences in death anxiety between the death and dental pain conditions ($p = 1.000$).

Effects on Worldview Defense. To test the hypothesis that COVID-19 would increase worldview defense, a third one-way ANOVA was performed with condition (i.e., Death, Dental Pain, COVID-19) as the independent variable and worldview defense as the dependent variable. The omnibus test of the one-way ANOVA was not statistically significant, $F(2, 99) = 2.032, p = .136$.

Table 1

Reports of Main Dependent variables F-value, P-value, and means per condition

Measure	<i>F</i> ratio	<i>p</i>	COVID-19	Death	Dental Pain
			<i>M</i>	<i>M</i>	<i>M</i>
Mortality Salience	0.834	0.437	1.48	1.77	1.7
Death Anxiety	3.81	.025*	2.31	2.67	2.71
Worldview Defense	2.03	0.136	5.44	6.16	6.34

**p* < .05

Discussion

Using TMT – a theory positing that human behavior is motivated by a paralyzing fear of death (Greenberg, Pyszczynski, & Solomon, 1989) – as the theoretical framework, this study sought to replicate and extend classic TMT findings by showing that viewing COVID-19-related images would prime death (as evidenced by increases in mortality salience and death anxiety) and lead to worldview defense. In other words, it was predicted that thinking about COVID-19 led to similar psychological and behavioral consequences as thinking about death has been shown to do (Greenberg et. al., 1992; Greenberg et. al., 1994). Using a three-groups design with experimental condition (death, dental pain, and COVID-19) as the independent variable and mortality salience, death anxiety, and worldview defense as the dependent variables, it was predicted that individuals would defend their worldviews when their mortality is made salient, especially in the case of COVID-19, similarly to published findings (Arndt et al., 1997; Rosenblatt et al., 1989). However, the predicted results were not obtained. When significant results were obtained, the differences were between conditions that were not predicted and did not replicate previous findings.

Implications

The results of the study do not support the predications. The results of the 3 x 3 Chi-square test revealed that individuals were able to accurately recall the experimental condition to which they were assigned. Additionally, the non-significant findings among

mortality (measured with death thought accessibility) demonstrated that, at least in this experiment, COVID-19 did not prime mortality salience (notably, the death prime did not prime mortality salience, which suggests that the picture manipulation may not have worked to increase mortality salience).

However, the results of the One-way ANOVA were significant when testing condition effects on death anxiety. The results from the post-hoc tests examining the effects of condition on death anxiety indicated that there was a significant difference between the dental pain and COVID-19 condition. When looking at the descriptive statistics, however, the dental pain condition ($M = .034$) had a mean death anxiety score greater than that of the COVID-19 condition ($M = .362$). Individuals in the dental pain condition experienced the most death anxiety, which is counter to other previous research using this manipulation (Greenberg et al., 1986; Greenberg et al., 1990; Rosenblatt et al., 1989). This could have been the result of introducing pictures to the existing essay manipulations. Participants may have perceived the dental pain picture array as more frightening than that of the death of COVID-19 picture arrays. This would explain why the obtained results differ from previous findings.

The results from the final omnibus test examining the effects of condition on worldview defense found that there were not statistical significance differences among the groups. This indicates that individuals did not defend their worldviews when faced with their own mortality, dental pain, or COVID-19. There are at least two explanations for why the results from this study did not replicate the results of previous studies, which

found that participants in the death condition engaged in greater worldview defense than those in the dental pain condition (Greenberg et al., 1986; Greenberg et al., 1990; Rosenblatt et al., 1989).

Other explanations for obtained results

First, the ostensible second study was titled “Social Judgement and Personality.” This could have created a self-serving bias among participants who did not want to be perceived negatively by the researcher. As such, participants may have been hesitant to defend their worldview by disparaging a foreign-exchange student. Additionally, the obtained non-significant results could be the consequence of giving individuals a task that involves openly deriding an outsider. Research has shown that the political and social worlds are becoming increasingly accepting of diversity (Rue, 2018). It is possible that this worldview defense task, which was developed in the 1980s, may no longer be valid as culture continues to progress. Across the board, the results of this study did not replicate previous findings. Because of the abundance of non-significant findings and finding in unpredicted directions, interpretations of these results are limited.

Limitations and Future Direction

Geography. The COVID-19 pandemic itself and governmental agencies’ responses to it have become politicized, with political conservatives calling for personal responsibilities and political liberals seeking government-imposed restrictions. Importantly, the State of Texas, where Stephen F. Austin State University is located, has taken a hands-off approach to handling the pandemic by prohibiting mask and vaccine

mandates and allowing businesses to reopen particularly early in the pandemic.

Therefore, it is possible that the COVID-19 manipulation is not actually priming death, but is perhaps priming political ideology and/or reactance to how local, state, and federal governments responded to the pandemic. Similar studies should be conducted in other geographic locations, those with a variety of governmental responses to the pandemic.

Methodology. Although great care was taken to find pictures to elicit death, dental pain, and COVID-19, respectively, it was not known whether these pictures would produce a powerful enough manipulation to cause expected changes in the dependent variables. It is worth noting, however, that original TMT (death and dental pain) manipulations involved no visual imagery and asked participants to simply imagine their own death/dental pain. Visual imagery was unsuccessfully added to this study to bolster the influence of the manipulation, but it is possible that other versions of the manipulation might be even stronger (e.g., having participants in the death condition complete the study in a morgue).

Another point to make is that this study is under powered. The total N for this study should have been N=159 participants, but unfortunately the analysis only contains N=103. With an addition to the number of participants there could be a difference in results and therefore implication of this study.

Future Directions. It may be beneficial to see whether these results translate to other pathogenic types of sicknesses. There has been some research looking at behavioral consequences of the presence of Ebola (Arrowood, Cox, Kersten, Routledge, Shelton, &

Hood, 2017) and other terminal diseases (e.g., cancer; Greenberg et al., 1994), but there has been little work comparing perceived death threat from different types of pathogens.

Another Theoretical Explanation. Another perspective could include the Socioemotional Selectivity Theory (SST). SST posits that individuals with a limited future time perspective (FTP), believing and understanding that death is close, will be driven to obtain more emotionally, rather than less emotionally, satisfying goals and information than that of individuals with an open-ended FTP (Lockenhoff & Carstensen, 2004). There is evidence that supports that while chronological age may play a roll in FTP, that it is not the only factor that may influence FTP. For example (Lockenhoff & Carstensen, 2004) found that patients that suffered from HIV also have limited FTP's than their counterparts. Therefore, the idea that there could be an invisible killer in the air, could also be affecting individuals want to achieve more emotionally satisfying goals rather than intaking enough information to form good sound judgements. Which could lead to the rise of misinformation and distrust in the government or media.

Final Thoughts

Death is an unescapable part of every living being's life. The fact that death's effects are permanent and inevitable can be scary for many. To be able to move past this paralyzing death anxiety, individuals protect their worldviews by engaging in culturally appropriate activities. The purpose of this study was to be able to determine whether thinking about COVID-19 led to these same processes as thinking about death.

Unfortunately, this study failed to replicate previous finding, and no evidence was found

that thinking about COVID-19 led to similar psychological and behavioral process as thinking about death.

References

- Arndt, J., Greenberg, J., Pyszczynski, T., Solomon, S. (1997). Subliminal exposure to death-related stimuli increases defense of the cultural worldview. *Psychological Science*, 8(5)- 379- 385.
- Abeyta, A. A., Juhl, J., Routledge, C. (2014). Exploring the effects of self-esteem and mortality salience on proximal and distally measured death anxiety: A further test of the dual process model of terror management. *Motivation and Emotion*, 38, 523-528. DOI 10.1007/s11031-014-9400-y
- Arrowood, R. B., Cox, C. R., Kersten, M., Routledge, C., Shelton, J. T., & Hood, R. W. (2017). Ebola salience, death-thought accessibility, and worldview defense: A terror management perspective. *Death Studies* 41(9), 585-591.
<https://doi.org/10.1080/07481187.2017.1322644>
- Atherton, O. E., Sutin, A. R., Terracciano, A., & Robins, R. W. (2021). Stability and change in the Big Five personality traits: Findings from a longitudinal study of Mexican-origin adults. *Journal of Personality and Social Psychology*. Advance online publication <https://doi.org/10.1037/pspp0000385.supp>
- Bargh, J. A., & Chartrand, T. L. (2000). Studying the mind in the middle: A practical guide to priming and automaticity research. *Handbook of Research Methods in Social Psychology*, 1-26.
- Becker, E. (1973). *The denial of death*. New York: Free Press.

- Bendau, A., Petzold, M. B., Pykosch, L., Maricic, L. M., Beltzer, F., Rogoll, J., Grobe, J., Strohle, A., & Plag, J. (2020) Associations between covid-19 related media consumption and symptoms of anxiety, depression, and covid-19 related fear in the general population in Germany. *European Archives of Psychiatry and Clinical Neuroscience*, (2021) 271, 283- 291. doi.org/10.1007/s00406-020-01171-6
- Ciarocco, N. J., Twenge, J. M., Muraven, M., & Tice, D. M. (2012, January). The State Self Control Capacity Scale: Reliability, Validity, & Correlations with Physical & Psychological Stress. Poster presented at the annual meeting of the Society for Personality and Social Psychology, San Diego, CA.
- Dalbert, C. (1999). The world is more just for me than generally: About the personal belief in a just world scale's validity. *Journal of Social Justice Research*, 12(2), 79-98.
- Dunning, D., Johnson, K., Ehrlinger, J., & Kruger, J. (2003). Why people fail to recognize their own incompetence. *Current Directions in Psychological Science*, 12(3), 83–87. <https://doi-org.steenproxy.sfasu.edu/10.1111/1467-8721.01235>
- Department of Veteran Affairs, (2021). America's wars. Factsheet.
- Eck, J., & Gebauer, J. E. (2021). A sociocultural norm perspective on Big Five prediction. *Journal of Personality and Social Psychology*. Advance online publication. 10.1037/pspp0000387
- Frey, D. (1978). Reactions to success and failure in public and private conditions. *Journal of Experimental Social Psychology*, 14, 172-179.
- Gailliot, M. T., Schmeichel, B. J., & Baumeister, R. F. (2006). Self-regulatory processes defend against the threat of death: effects of self-control depletion and trait self-control on thoughts and fears of dying. *Journal of Personality and Social Psychology*, 90(1), 49–62. DOI: 10.1037/0022-3514.91.1.49

- Gailliot, M. T., Schmeichel, B. J., & Maner, J. K. (2006). Differentiating the effects of self-control and self-esteem on reactions to mortality salience. *Journal of Experimental Social Psychology*, 43(2007), 894-901.
doi:10.1016/j.jesp.2006.10.011
- Gailliot, M. T., Stillman, T. F., Schmeichel, B. J., Maner, J. K., & Plant E. A. (2008). Mortality salience increases adherence to salient norms and values. *Personality and Social Psychology Bulletin*, 34(7), 993-1003.
<https://doi.org/10.1177%2F0146167208316791>
- Gosling, S. D., Rentfrow, P. J., & Swann, W. B., Jr. (2003). A very brief measure of the big five personality domains. *Journal of Research in Personality*, 37, 504-528.
- Greenberg, J., Pyszczynski, T., & Solomon, S. (1986). The causes and consequences of the need for self-esteem: A terror management theory. In R. F. Baumeister (Ed.), *Public self and private self* (pp. 189-212). New York: Springer.
- Greenberg, J., Pyszczynski, T., Solomon, S., Rosenblatt, A., Veeder, M., Kirkland, S., & Lyon, D. (1990). Evidence for terror management theory II: The effects of mortality salience on reactions to those who threaten to bolster the cultural worldview. *American Psychological Association*, 58(2), 308-318. 0022-3514/90/S00.75
- Greenberg, J., Simon, L., Pyszczynski, T., Solomon, S., & Chatel, D. (1992). Terror management and tolerance: Does mortality salience always intensify negative reactions to others who threaten one's worldview? *Journal of Personality and Social Psychology*, 63(2), 212-220. 0022-3514/92/S3.00
- Greenberg, J., Pyszczynski, T., Solomon, S., Somin, L., & Breus, M. (1994). Role of consciousness and accessibility of death-related thoughts in mortality salience effects. *Journal of Personality and Social Psychology*, 67(4), 627-637.

- Hayes, J., Schimel J., Arndt, J., Faucher, E.H. (2010). A theoretical and empirical review of the death-thought accessibility concept in terror management research. *Psychological Bulletin*, 136(5), 699-749. DOI: 10.1037/a0020524.
- JackFacts. (2021). Headcount. Retrieved August 22, 2021.
https://jackfactsnew.sfasu.edu/ibi_apps/bip/portal/JackFacts8
- Koc, V., & Kafa, G. (2019). The roles of self-esteem and attachment within the framework of terror management theory. *Current Approaches in Psychiatry*, 11(1), 129-139. doi: 10.18863/pgy.41933
- Kohut, M., Kohutova, V., & Halama, P. (2021). Big five predictors of pandemic-related behavior and emotions in the first and second COVID-19 pandemic wave in Slovakia. *Personality and Individual Differences*, 180(2021), 1-7.
<http://dx.doi.org/10.1016/j.paid.2021.110934>
- Lockenhoff, C. E., & Carstensen, L. L. (2004). Socioemotional Selectivity Theory, aging, and health: The increasingly delicate balance between regulating emotions and making tough choices. *Journal of Personality*, 72(6)- 1395-1424.
- Lopez-Castro, T., Brandt, L., Anthonipillai, N. J., Espinosa, A., & Melara, R. (2021). Experiences, impacts and mental health functioning during a covid-19 outbreak and lockdown: Data from a diverse New York City sample of college students. *PLOS ONE*, 16(4), 1-17. doi.org/10.1371/journal.pone.0249768
- Markus, H. R., & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review*, 98(2), 224-253.
- Mayer, J. D., & Gaschke, Y. N. (1988). The experience and meta-experience of mood. *Journal of Personality and Social Psychology*, 55, 102-111.
- Pyszczynski, T., Greenberg, J., & Solomon, S. (1999). A dual-process model of defense against conscious and unconscious death-related thoughts, an extension of terror management theory. *Psychological Review*, 106(4), 835-845.

Pyszczynski, T., Lockett, M., Greenberg, J., Solomon, S. (2021). Terror management theory and the COVID-19. *Journal of Humanistic Psychology*, 61(2), 173-189.
doi.org/10.1177/0022167820959488

Rosenberg, M. (1979). *Conceiving the Self*. New York: Basic Books.

Rosenblatt, A., Greenberg, J., Solomon, S., Pyszczynski, T., & Lyon, D. (1989). Evidence for terror management theory I: The effects of mortality salience on reactions to those who violate or uphold cultural values. *Journal of Personality and Social Psychology*, 57, 681-690.

Routledge, C., Ostafin, B., Juhl, J., Sedikides, C., Cathay, C., & Liao, J. (2010). Adjusting to death: The effects of mortality salience and self-esteem on psychological well-being, growth motivation, and maladaptive behavior. *Journal of Personality and Social Psychology*, 99(2), 897-916. DOI: 10.1037/a0021431

Rue, Penny. (2018). Make way, millennials, here comes gen z. *About Campus*, 23(3), 5-12. <https://doi.org/10.1177/1086482218804251>

Sanchez, C., & Dunning, D. (2021). The anti-scientist bias: The role of feelings about scientists in COVID-19 attitudes and behaviors. *Journal of Applied Social Psychology*, (2021)51, 461-473. DOI: 10.1111/jasp.12748

Tangney, J. P., Baumeister, R. F., & Boone, A. L. (2004). High self-control predicts good adjustment, less pathology, better grades, and interpersonal success. *Journal of Personality*, 72, 271-322. doi:10.1111/j.0022-3506.2004.00263.x

The State of Texas. (2021, March 2). Governor Abbott lifts mask mandate, opens Texas to 100 percent. [Press release]. <https://gov.texas.gov/news/post/governor-abbott-lifts-mask-mandate-opens-texas-100-percent>

Tomás-Sábado, J., & Gómez-Benito, J. (2005). Construction and validation of the Death Anxiety Inventory. *European Journal of Psychological Assessment*, 21, 108-114.

Washington Post (2021). A pandemic year. Washington Post Staff.
https://www.washingtonpost.com/health/interactive/2021/coronavirus-anniversary/?itid=sf_coronavirus_sn_coronavirus-anniversary_7

World Health Organization. (2020). Archived- WHO Timeline- Covid-19. World Health Organization. Retrieved Aug. 21,2021. <https://www.who.int/news/item/27-04-2020-who-timeline---covid-19>

World Health Organization. (2022). Covid-19 Death report.
<https://covid19.who.int/>

APPENDICES

APPENDIX A: INFORMED CONSENT FORM

Investigator's statement

PURPOSE: The research team is interested in two things: “Visual Perception and Word Recognition” and “Social Judgement and Personality.”

DURATION: The length of time you will be involved with this study is approximately 45 minutes.

PROCEDURES: If you agree to be in this study, we will ask you to do the following things: complete surveys, review photos, read essays and give evaluations.

RISKS: You may experience mild to moderate emotional discomfort, mild boredom, or fatigue as a result of completing surveys. If you experience negative effects as a result of participating in this study, you may contact SFASU Counselling Services, located on the 3rd floor of the Rusk building, or contact their office at (936) 468-2401 or counseling@sfasu.edu.

CONFIDENTIALITY: The records of this study will be kept private. Your name will not be attached to answers you provide. The investigators will have access to the raw data. In any sort of report that is published or presentation that is given, we will not include any information that will make it possible to identify a participant. This number will not be tied to any type of identifying information about you. Once collected, all data will be kept in secured files, in accord with the standards SFASU, federal regulations, and the American Psychological Association. In addition, please remember that the experimenters are not interested in any individual person's responses. We are interested in how people in general respond to the measures.

VOLUNTARY NATURE OF THE STUDY: Your participation in this study is voluntary. In addition, you may choose to not respond to individual items in the survey. Your decision whether or not to participate will not affect your current or future relations with SFASU nor any of its representatives. If you decide to participate in this study, you are free to withdraw from the study at any time without affecting those relationships.

CONTACTS AND QUESTIONS:

Sahvannah Shavers: shaverssk@jacks.sfasu.edu

Dr. Lauren E. Brewer: BrewerLE@sfasu.edu

If you have questions or concerns regarding this study and would like to speak with someone other than the experimenters, you may contact The Office of Research and Sponsored Programs at (936) 468-6606.

BENEFITS: Students will be recruited from General Psychology courses and online.

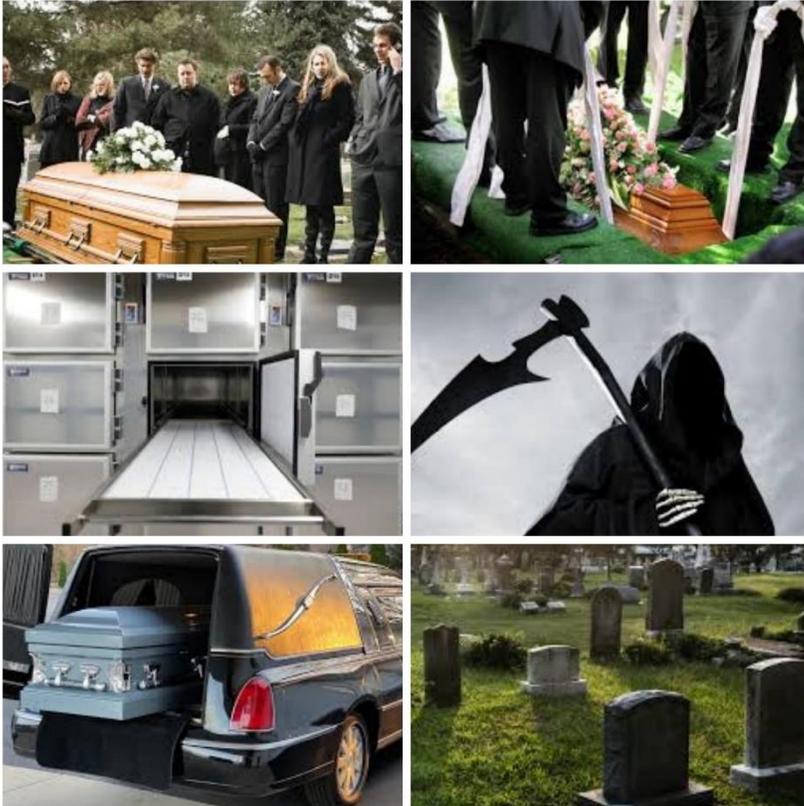
STATEMENT OF CONSENT

The procedures of this study have been explained to me and my questions have been addressed. The information that I provide is confidential and will be used for research purposes only. I am 18 years of age and I understand that my participation is voluntary and that I may withdraw anytime without penalty. I have read the information in this consent form and I agree to be in the study.

Signature of Participant: _____ **Date:**

APPENDIX B.1: Mortality Attitudes Personality Survey- Death Condition

To answer the following questions please use your “gut” reaction.



What would happen to you as you physically die?

What emotions do the thought of your own death arouses in you?

APPENDIX B.2: Mortality Attitudes Personality Survey- Dental Condition

To answer the following questions please use your “gut” reaction.



What would happen to you physically at the dentist?

What emotions does the thought of going to the dentist arouse in you?

APPENDIX B.3: Mortality Attitudes Personality Survey- COVID-19 condition

To answer the following questions please use your “gut” reaction.



What would happen to you physically while you think about the COVID-19 pandemic?

What emotions are aroused in you when you think about living in the COVID-19 pandemic?

APPENDIX C: Manipulation Check

What was the theme of the photos you just reviewed?

Death

Dental Pain

COVID-19

APPENDIX D: Death-Thought Accessibility (Mortality Salience) Task

Note: Words in yellow are the target words that could be completed with either a death or non-death word. Participants will not see the shading.

Below, please “solve” each word fragment by forming complete words. Complete each word fragment with the first word that comes to mind. There may be more than one way fill in the missing letter(s), but try to write in the first word you think of. After you finish this page, please go on to the next one.

1. S O _ A

2. _ K A T E S

3. S K _ L L

4. D O _

5. _ A S H

6. C R E M _

7. C O F F _ _

8. S H O _ _

9. GRA _ E

10. UND _ R

11. _ _ WER

12. _ A W

13. _ ILLED

14. ANG _ _

15. GUE _ _

16. DE _ _

17. SEN _ TE

18. BUR _ _ D

19. _ REA _

20. _ INE

APPENDIX E: Death Anxiety Inventory

1. I get upset when I am in a cemetery
2. The certainty of death makes life meaningless
3. It annoys me to hear about death
4. I have always been worried about the possibility of dying young
5. I find it difficult to accept the idea that it all finishes with death
6. I think I would be happier if I ignored the fact that I have to die
7. I think I am more afraid of death than most people
8. Getting old worries me
9. I find it really difficult to accept that I have to die
10. I would never accept a job at a funeral home
11. The idea that there is nothing after death frightens me
12. The idea of death troubles me
13. I very often think about the cause of my death
14. I would like to live to a very old age
15. Coffins make me nervous
16. I am worried about what's after death
17. I often think I may have a serious disease
18. Dying is the worst thing it could happen to me
19. The sight of a corpse deeply shocks me
20. I frequently think about my own death

Tomás-Sábado, J., & Gómez-Benito, J. (2005). Construction and validation of the Death Anxiety Inventory. *European Journal of Psychological Assessment*, 21, 108-114.

APPENDIX F: Trait Self-Control Scale

Using the scale provided, please indicate how much each of the following statements reflects how you typically are.

Not at all (1) to Very much (5)

- *1. I am good at resisting temptation. 1——2——3——4——5 (R)
- *2. I have a hard time breaking bad habits. 1——2——3——4——5 (R)
- *3. I am lazy. 1——2——3——4——5 (R)
- *4. I say inappropriate things. 1——2——3——4——5
- *5. I do certain things that are bad for me, if they are fun. 1——2——3——4——5
- *6. I refuse things that are bad for me. 1——2——3——4——5 (R)
- *7. I wish I had more self-discipline. 1——2——3——4——5
- *8. People would say that I have iron self- discipline. 1——2——3——4——5 (R)
- *9. Pleasure and fun sometimes keep me from getting work done. 1——2——3——
4——5 (R)
- *10. I have trouble concentrating. 1——2——3——4——5
- *11. I am able to work effectively toward long-term goals. 1——2——3——4——
5 (R)
- *12. Sometimes I can't stop myself from doing something, even if I know it is
wrong. 1——2——3——4——5 (R)
- *13. I often act without thinking through all the alternatives. 1——2——3——4——
5 (R)

* Items included in the Brief Self Control measure

(R) Reversed Items

APPENDIX G: Anti-American Essay

When I first came to this country from my home in Israel I believed it was the “land of opportunity,” but I soon realized this was only true for the rich. The system here is set up for rich against the poor. All people care about here is money and trying to have more than other people. This no sympathy for people. It’s all one group putting down others and nobody cares about the foreigners. The people only let foreigners have jobs like pick fruit or wash dishes, because no American would do it. Americans are spoiled and lazy and want everything handed to them. America is a cold country that is unsensitive to needs and problems of foreigners. It thinks it’s a great country, but it’s not.

APPENDIX H: Brief Mood Inspection Inventory

**Please use the following adjectives to report how you are feeling RIGHT NOW.
Using the scale below, please write in the number that best represents how you feel
RIGHT NOW.**

1	2	3	4	5	6	7	
definitely do not feel						definitely feel	
___ 1.						___ 9.	fed up
___ 2.						___ 10.	drowsy
___ 3.						___ 11.	sad
___ 4.						___ 12.	lively
___ 5.						___ 13.	caring
___ 6.						___ 14.	content
___ 7.						___ 15.	peppy
___ 8.						___ 16.	nervous

APPENDIX I: State Self-Control Capacity Scale (SSCCS)

INSTRUCTIONS: Please respond to the statements below, describing how you feel right now (not usually). We are interested in your feelings at this moment. Circle one response (one number) under each item using the following scale:

1 = not true 2 = somewhat not true 3 = a little not true 4 = neutral 5 = a little true

6 = somewhat true 7 = very true

1. I feel mentally exhausted.

not true 1 2 3 4 5 6 7 very true

2. Right now, it would take a lot of effort for me to concentrate on something.

not true 1 2 3 4 5 6 7 very true

3. I need something pleasant to make me feel better.

not true 1 2 3 4 5 6 7 very true

4. I feel motivated.

not true 1 2 3 4 5 6 7 very true

5. If I were given a difficult task right now, I would give up easily.

not true 1 2 3 4 5 6 7 very true

6. I feel drained.

not true 1 2 3 4 5 6 7 very true

7. I have lots of energy.

not true 1 2 3 4 5 6 7 very true

8. I feel worn out.

not true 1 2 3 4 5 6 7 very true

9. If I were tempted by something right now, it would be very difficult to resist.

not true 1 2 3 4 5 6 7 very true

10. I would want to quit any difficult task I was given.

not true 1 2 3 4 5 6 7 very true

11. I feel calm and rational.

not true 1 2 3 4 5 6 7 very true

12. I can't absorb any more information.

not true 1 2 3 4 5 6 7 very true

13. I feel lazy.

not true 1 2 3 4 5 6 7 very true

14. Right now I would find it difficult to plan ahead.

not true 1 2 3 4 5 6 7 very true

15. I feel sharp and focused.

not true 1 2 3 4 5 6 7 very true

16. I want to give up.

not true 1 2 3 4 5 6 7 very true

17. This would be a good time for me to make an important decision.

not true 1 2 3 4 5 6 7 very true

18. I feel like my willpower is gone.

not true 1 2 3 4 5 6 7 very true

19. My mind feels unfocused right now.

not true 1 2 3 4 5 6 7 very true

20. I feel ready to concentrate.

not true 1 2 3 4 5 6 7 very true

21. My mental energy is running low.

not true 1 2 3 4 5 6 7 very true

22. A new challenge would appeal to me right now.

not true 1 2 3 4 5 6 7 very true

23. I wish I could just relax for a while.

not true 1 2 3 4 5 6 7 very true

24. I am having a hard time controlling my urges.

not true 1 2 3 4 5 6 7 very true

25. I feel discouraged.

not true 1 2 3 4 5 6 7 very true

APPENDIX J: Ten-Item Personality Inventory (TIPI)

Here are a number of personality traits that may or may not apply to you. Please write a number next to each statement to indicate the extent to which you agree or disagree with that statement. You should rate the extent to which the pair of traits applies to you, even if one characteristic applies more strongly than the other.

Disagree Strongly Disagree Moderately Disagree a little Neither Agree a little Agree
Moderately Agree Strongly

1 2 3 4 5 6 7

I am...

1. _____ Extraverted, enthusiastic.
2. _____ Critical, quarrelsome.
3. _____ Dependable, self-disciplined.
4. _____ Anxious, easily upset.
5. _____ Open to new experiences, complex.
6. _____ Reserved, quiet.
7. _____ Sympathetic, warm.
8. _____ Disorganized, careless.
9. _____ Calm, emotionally stable.
10. _____ Conventional, uncreative.

Scoring Instructions: Higher numbers = more of that trait

Extraversion: 1, 6R, Agreeableness: 2R, 7, Conscientiousness: 3, 8R, Emotional Stability:
4R, 9

Openness to Experiences: 5, 10R , *(“R” denotes reverse-scored items)

APPENDIX K: Rosenberg Self-Esteem Scale

0 = Strongly Disagree; 1 = Disagree; 2 = Agree; 3 = Strongly Agree

1. _____ I feel that I am a person of worth, at least on an equal plane with others.
2. _____ I feel that I have a number of good qualities.
3. _____ All in all, I am inclined to feel that I am a failure.
4. _____ I am able to do things as well as most people.
5. _____ I feel I do not have much to be proud of.
6. _____ I take a positive attitude toward myself.
7. _____ On the whole, I am satisfied with myself.
8. _____ I wish I could have more respect for myself.
9. _____ I certainly feel useless at times.
10. _____ At times I think that I am no good at all

APPENDIX L: Belief in a Just World

Using the scale provided, please indicate to what extent you agree with the following statements.

Disagree

Agree

1	I am confident that justice always prevails over injustice.	1	2	3	4	5
2	I think basically the world is a just place.	1	2	3	4	5
3	I am convinced that, in the long run, people will be compensated for injustices.	1	2	3	4	5
4	I firmly believe that injustices in all areas of life (e.g. professional, family, politics) are the exception rather than the rule.	1	2	3	4	5
5	I believe that, by and large, people get what they deserve.	1	2	3	4	5
6	I think that people try to be fair when making important decisions.	1	2	3	4	5

APPENDIX M: Demographics

Instructions: Please provide the following information by indicating your answer for each question.

Sex: Male Female Prefer not to answer

Age (in years): _____

I would describe my political views as (choose ONE):

1. Liberal
2. Conservative

I would describe my ethnicity as (choose ONE):

1. Hispanic or Latino
2. Not Hispanic or Latino

I would describe my race as (choose ONE):

1. American Indian/Alaska Native
2. Asian
3. Native Hawaiian or Other Pacific Islander
4. Black or African American
5. White
6. More than one race
7. Unknown or not reported

Have you contracted the COVID-19 virus since the start of the pandemic (Spring 2020)?

1. Yes
2. No
3. Maybe

Has someone close to you (friends or family) contracted the COVID-19 virus since the start of the pandemic (Spring 2020)?

1. Yes
2. No
3. Maybe

Has someone close to you (friends or family) passed due to the COVID-19 virus?

1. Yes
2. No
3. Prefer not answer

APPENDIX N: Debriefing
Stephen F Austin State University

Thank you for participating in the two studies entitled, “Visual Perception and Word Recognition” and “Social Judgement and Personality,” conducted by Savannah Shavers and Dr. Laruen Brewer in the Department of Psychology at SFASU. These studies were designed to determine whether COVID-19 primes people about their own death. If it does, researchers also wanted to know whether thinking about COVID-19 caused death-related anxiety and/or people to defend their self-held beliefs (i.e., their worldview).

As a reminder, your participation in this study is confidential, and your name is not attached to any answers you provided. If you experienced negative effects as a result of participating in this study, you may contact SFASU Counseling Services, located on the 3rd floor of the Rusk Building, or contact their office at (936) 468-2401 or counseling@sfasu.edu.

We respectfully ask that you do not communicate to other students about the nature of this study or the predicted results until the end of the project. It is absolutely essential that participants come into this study unaware of the variables being measured.

If you have any additional questions or wish to be informed of the results of the study, you may contact Savannah Shavers at shaverssk@jacks.sfasu.edu or Dr. Lauren Brewer at BrewerLE@sfasu.edu or (936) 468-1502. Additionally, you may also contact the SFASU Office of Research and Graduate Studies at orgs@sfasu.edu or (936) 468-6606 if you would like more information regarding your rights as a research participant.

Thank you for your participation.

Now that you know the true purpose of this study, we’d like to again ask for your consent to use your data in our project. Are you willing to allow us to use your data in our research?

Yes, I consent

No, I do not consent

VITA

PROFESSIONAL AFFILIATION AND CONTACT INFORMATION

Graduate Assistant
Department of Mass Communication
Stephen F. Austin State University
Nacogdoches, Tx 75962
Phone: (903)- 658-7760
Sahvannahshavers6@gmail.com

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EDUCATION

**M. A., Stephen F. Austin State University, Projected Graduation: May 2022,
General Psychology**

**Thesis (In Progress): COVID-19's Effects on Mortality Salience, Death Anxiety, and
Worldview defense**

**B. A., Stephen F. Austin State University, Aug. 2020, Major: Psychology Minors:
Anthropology, & Modern Languages
(Spanish)**

RESEARCH INTERESTS

- Terror Management Theory
- Self-regulation/ Ego Depletion
- Socioemotional Selectivity Theory
- Decision Making- Health
- Aggression

SKILLS

Qualtrics, Advanced

SPSS, Advanced

Microsoft Office, Advanced

CITI Trained

PROFESSIONAL HISTORY

Residential Assistant- Burke Center Lufkin, TX, *October 2019- June 2020*

TEACHING EXPERIENCE

Graduate Teaching Assistant, *Fall 2020*

Department of Psychology, Stephen F. Austin State University, Nacogdoches, Tx

A Top Responsibility

- Handling student grades

Another Skill

- Working with and creating correlation tables

Graduate Assistant, *Fall 2021- Spring 2022*

Department of Mass Communication, Stephen F. Austin State University, Nacogdoches, Tx

A Top Responsibility

- Lab Manager

Another Skill

- TV Broadcasting - Floor Manager

PRESENTATIONS AND PUBLIC APPEARANCES

East Texas Archeological Society- February 2019

Co- Presenters: Sabrina Owen, Savannah Shavers

Advisor: Dr. George E. Avery

University of Texas - Tyler

Scientific Literacy - PSYC 3300, September 30, 2020

Guest lecturer- *Stephen F. Austin State University*

Topic: *APA writing style*

Advanced Research Design - PSYC 5385, September 9, 2021

Guest lecturer- *Stephen F. Austin State University*

Topic: *Using Qualtrics*

Graduate Research Conference- April 21, 2022

Advisor: *Dr. Lauren E. Brewer*

Paper Presenter- *Stephen F. Austin State University*

GRANT WORK

Developing a Framework White Paper for Market Launch of and Recruitment of Eligible Adults in BAAS Degree Completion Programs: A Case Study of the Organizational Leadership Completer Program

Innovation Grant- Graduate Student Worker, Fall 2021- Spring 2022

Faculty: *Dr. King & Dr. Roy*

Department of Languages, Cultures and Communication, *Stephen F. Austin State University*

VOLUNTEERING

Archaeology Lab- Student Worker, Fall 2018- Spring 2019

Stephen F. Austin State University

Undergraduate Research Conference -Student Worker, Spring 2021

Stephen F. Austin State University

Archaeology Lab- Student Worker, Fall 2021

Stephen F. Austin State University

Graduate Research Conference- Student Worker, Spring 2022

Stephen F. Austin State University

TRAVEL

Advanced Spanish – 6hrs, *Summer 2019*

Madrid, Spain

Stephen F. Austin State University