

Fall 12-1-2012

# Mortality Salience and Worldview Defense

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The University of Southern Mississippi

EMOTION DYSREGULATION AND MORTALITY SALIENCE

by

Toni Brooke Merkey

Abstract of a Dissertation  
Submitted to the Graduate School  
of The University of Southern Mississippi  
in Partial Fulfillment of the Requirements  
for the Degree of Doctor of Philosophy

December 2012

## ABSTRACT

### EMOTION DYSREGULATION AND MORTALITY SALIENCE

by Toni Brooke Merkey

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Research generated from Terror Management Theory has demonstrated that reminding participants of their eventual death increases self-esteem striving and worldview defense (Pyszczynski, Greenberg, Solomon, Arndt, & Schimel, 2004). The hypothesis in the present study is that individuals higher in emotion dysregulation will engage in higher levels of worldview defense than those lower in emotion dysregulation. This hypothesis was based on the assumption that individuals high in emotion dysregulation will have a greater need to regulate their emotions by engaging in worldview defense after being asked to think about their own death than will non-emotionally dysregulated individuals. To test this hypothesis, 110 undergraduate participants were randomly assigned to a mortality salience or control condition. All participants completed the Differences in Emotion Regulation Scale (DERS). Level of worldview defense was measured by participants' reactions to pro- vs. anti-American essays. The results were analyzed using a regression model, with DERS scores standardized and treated as a continuous measure. The overall regression model was not significant. The regression model was non-significant when condition was entered alone in the first step of the regression equation and remained non-significant when DERS scores were entered into the second step. Exploratory analyses examined the moderating role of neuroticism and extraversion; neither significantly moderated the relation between mortality salience and worldview defense. Possible reasons for a failure to achieve a main

effect for condition, such as possible experimenter or sample characteristics, are explored. Possible reasons why emotion dysregulation did not moderate the association between mortality salience and worldview defense included failure to achieve a main effect of condition, the possibility that people high in emotion dysregulation “checked-out” of the study when they began feeling emotional distress, or that emotion dysregulation is simply unrelated to worldview defense following mortality reminders. Future research could explore whether extraversion moderates the relation between mortality salience and worldview defense if and when a main effect of condition is present.

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A Dissertation  
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December 2012

## DEDICATION

To my parents.

## ACKNOWLEDGMENTS

The writer would like to thank the dissertation chair, Dr. David K. Marcus, and the other committee members, Dr. Tammy Barry, Dr. Chris Barry, and Dr. Virgil Zeigler-Hill.



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## CHAPTER I

### INTRODUCTION

Terror Management Theory (TMT; Greenberg, Pyszczynski, & Solomon, 1986) is one of several theories that speculate on the purpose of self-esteem. According to TMT, the function of self-esteem is to buffer us from the anxiety we could potentially experience due to the knowledge of our eventual death. As humans, we have this knowledge, and need self-esteem to shield us from the terror that would otherwise result (Pyszczynski et al., 2004).

According to the theory, one's worldview plays a critical role in this process, because worldviews are

humanly constructed shared symbolic conceptions of reality that give meaning, order, and permanence to existence; provide a set of standards for what is valuable; and promise some form of either literal or symbolic immortality to those who believe in the cultural worldview and live up to its standards of value (Pyszczynski et al., 2004, p. 436).

It is one's worldview that gives meaning to one's life. The worldview provides the possibility of one's life having meaning beyond death, either literally with the promise of an afterlife, or in a symbolic manner such as by having descendants (Pyszczynski et al., 2004). However, simply having a worldview is not enough. Individuals must feel that they are contributing to the culture that they subscribe to in order to benefit from it as a death-anxiety buffer (Arndt & Greenberg, 1999). If individuals feel as though they are living up to the standards of their worldview, then high self-esteem and low death-related anxiety result (Pyszczynski et al., 2004).

Although many studies have found that reminders of mortality lead to increases in worldview defense (for a meta-analytic review of studies relating to Terror Management Theory, see Burke, Martens, & Faucher, 2010), there are individual differences in the use of worldview defense. For example, neuroticism has been found to moderate the effect of mortality salience on worldview defense (discussed in greater detail below). One potential moderating variable that has not yet been studied is emotion dysregulation. High levels of emotion dysregulation have been linked to psychological disorders such as borderline personality disorder (Gratz, Rosenthal, Tull, Lejuez, & Gunderson, 2006; Linehan, 1993) and generalized anxiety disorder (Mennin, Holaway, Fresco, Moore, & Heimberg, 2007). How will individuals high in emotion dysregulation react when asked to contemplate their own mortality? Will they engage in more worldview defense than others in an attempt to regulate their emotional state, or will they engage in less because they are less willing or able?

#### Overview of Terror Management Theory

A basic premise of TMT is that individuals' cultural worldviews buffer them from the anxiety associated with the knowledge of their eventual death. This process leads to high motivation for the individual to maintain a belief in his or her worldview and to defend it when it is threatened (Rosenblatt, Greenberg, Solomon, Pyszczynski, & Lyon, 1989). In a series of studies, Rosenblatt et al. (1989) looked at how increasing mortality salience affects participants' views of those who violate or live up to cultural expectations. In their first study, experimenters used municipal court judges as participants. They made mortality salient to half of these participants by having them complete questionnaires concerning their feelings about their own eventual death. The

participants were then asked to set “bond” for a hypothetical prostitute; the crime of prostitution was chosen because it “emphasized the moral nature of the alleged crime” (Rosenblatt et al., 1989, p. 682). Participants in the mortality salience condition assigned a significantly higher bond to the prostitute than the control participants. The researchers concluded that “inducing subjects to think about their mortality presumably increased their need for faith in their values, and thus increased their desire to punish the moral transgressor” (Rosenblatt et al., 1989, p. 683).

In the same paper, Rosenblatt et al. (1989) tested another hypothesis derived from Terror Management Theory. Mortality salience should not only affect desire to punish moral transgressors; it should also affect desire to reward those who uphold moral values (Rosenblatt et al., 1989). In addition to having participants make a bond assessment for a hypothetical prostitute as in their previous study, participants were asked to “recommend a reward for a woman who helped police apprehend a criminal” (Rosenblatt et al., 1989, p. 684). Participants in the mortality salience condition offered a much higher reward to someone who upheld the cultural worldview.

Greenberg et al., (1990) conducted several studies that examined the link between mortality salience and defense of the participants’ worldview. In their first study, Christian participants who were reminded of their mortality by being asked to write about it later rated Christians more positively than Jews on the Interpersonal Judgment Scale (IJS). In their third study, participants in the mortality salience condition rated those who had a high opinion of the participants’ own worldview, in the form of pro-United States statements, more positively than did control participants. They also rated others who had a negative view of the United States more negatively than did control subjects.

Kasser and Sheldon (2000, study 1) demonstrated the effect of mortality salience on another concept thought to be typical of the worldview of those in the United States – financial gain. According to Terror Management Theory, participants who are reminded of their mortality should increase their financial pursuits to bolster this worldview. Participants in the mortality salience condition wrote about their own death, whereas control participants were asked to write about music. When asked about their expected future financial status, participants in the mortality salience condition expected to be worth more financially than control subjects. Mortality salient subjects also expected to engage in more pleasure spending than control subjects.

Rosenblatt et al. (1989) examined alternative explanations for the effect of mortality salience on the worldview defense measures used. One alternative possibility they investigated was that negative affect, resulting from being reminded of death, caused the observed differences between the experimental and control groups. In the first three of their studies, mortality salience was manipulated by including a questionnaire that asked two questions: 1) “what will happen to them as they physically die” and 2) “the emotions that the thought of their own death arouses in them” (Rosenblatt et al., 1989). Participants in the control condition did not receive this questionnaire. Negative affect was assessed in both mortality salience and control participants using the Multiple Affect Adjective Checklist (MAACL; Zuckerman & Lubin, 1965, as reported in Rosenblatt et al., 1989). Across all three studies, the researchers found no indication that the mortality salience manipulation altered affect (Rosenblatt et al., 1989).

In Experiment 4 in the same series of studies, the authors tested the alternative possibility that increased self-awareness, resulting from self-reflection in the mortality

salience manipulation, was causing the observed differences between groups. They performed the same mortality salience manipulation performed in Experiment 3, but had some participants complete the questionnaires in front of a mirror. The purpose of the mirror was to increase self-awareness (Rosenblatt et al., 1989). If the observed differences between mortality salience and control participants was the result of increased self-awareness on the part of the participants in the mortality salience condition, then participants who did not experience the mortality salience manipulation but who filled out their questionnaires in front of a mirror should have the same level of worldview defense as those in the mortality salience condition. The researchers, however, found no significant differences between control subjects who completed questionnaires in front of a mirror and those who did not.

Another alternative explanation assessed by Rosenblatt et al. (1989) was the possibility that their findings were the result of increased arousal in the mortality salience condition. In Experiment 4, researchers essentially conducted a modified replication of Experiment 1 with the addition of measuring skin reactance, pulse rate, and pulse volume for all participants in order to examine arousal. Researchers did not find significant differences between mortality salience and control participants on any of the arousal measures.

Mortality salience does not always intensify negative reactions to those who contradict participants' worldviews. Greenberg, Simon, Pyszczynski, Solomon, and Chatel (1992) hypothesized that the effects of mortality salience on reactions to individuals who hold different beliefs would be attenuated when the value of tolerance was either very important or easily accessible to the participant. In their first study, they

used political ideology as a basis for assessing the effects of mortality salience when tolerance was highly important to some individuals. Evidence indicates that in Western countries, liberals tend to be more tolerant than conservatives (Stone, 1980, as cited in Greenberg et al., 1992). Participants were screened for their political ideology and were chosen for the study if they held either strongly liberal or strongly conservative beliefs. Mortality was made salient to half of the participants. The outcome measure consisted of participants' ratings of an extremely liberal other and an extremely conservative other, based on surveys supposedly filled out by those individuals. Therefore all participants evaluated both a liberal and a conservative individual. In the control condition, researchers found a significant tendency for subjects to prefer the target similar to themselves. In the mortality salience condition, the expected effect of an increased preference for similar targets and a decreased preference for dissimilar targets was found, but only for conservative participants. As predicted, liberal participants neither increased their preference for similar others nor decreased their preference for dissimilar others based on the mortality salience manipulation. The authors concluded that the effect of the mortality salience manipulation was attenuated in liberal participants because they placed a higher premium on the value of tolerance as a part of their worldview (Greenberg et al., 1992).

Given the possibility that mortality salience may have simply increased preference for conservative values in both liberal and conservative participants, the authors conducted a second study in which the value of tolerance was primed in some individuals. Participants' evaluations of foreign students, one with a pro-U.S. view and the other with an anti-U.S. view, served as the dependent measure. The priming of



tolerance attenuated the preference for the pro-U.S. student over the anti-U.S. student, but only in the mortality salience condition. This effect primarily occurred because of an increased preference for the anti-U.S. student among participants who were primed and were also in the mortality salience condition. Greenberg et al. (1992) concluded that the value of tolerance can counteract the effects of mortality salience on reactions to dissimilar others, either when it is primed or when it is important to the individual.

### Moderators of the Effects of Mortality Salience

Although the effects of mortality salience on worldview defense have been demonstrated in numerous studies, this effect might be moderated by various personality or individual difference variables. In a series of three studies, Goldenberg, Pyszczynski, McCoy, Greenberg, and Solomon (1999) examined the moderating role of neuroticism on the effect of mortality salience on the appeal of physical sex. Using TMT as a framework, the authors proposed that sex reminds us of our animal nature, which in turn reminds us of our mortality. In order to deal with this awareness, humans give sex meaning and incorporate it into our worldview. This association, however, is a problem for individuals high in neuroticism, because neuroticism has been found to correlate with worry about sex, guilt about sex, and the belief that sex is disgusting (Eysenck, as cited in Goldenberg et al., 1999). Based on this premise, the authors hypothesized that participants high in neuroticism would find physical sex less appealing after being reminded of death than either participants low in neuroticism or those high in neuroticism who had not been reminded of death. In the first study, the effect of mortality salience on appeal of sexual experiences was assessed, using neuroticism as a potential moderator of any effects. All participants completed the Neuroticism subscale of the Eysenck

Personality Inventory (Eysenck & Eysenck, as cited in Goldenberg et al., 1999).

Participants in the mortality salience condition completed a questionnaire consisting of 15 true-false questions about death, whereas control participants answered a similar questionnaire on watching television. Appeal of both the physical and romantic aspects of sex were examined using a 20 item measure. After a median split was conducted on neuroticism scores, the 2 (neuroticism) X 2 (mortality salience) ANOVA yielded a significant interaction. In the mortality salience condition, participants high in neuroticism rated physical sex less appealing than in the control condition. Participants low in neuroticism rated physical sex as being more appealing in the mortality salience condition than in the control condition.

In the second study, the authors explored whether death-related thoughts were more accessible in individuals high in neuroticism after exposure to cues invoking the physical aspects of sex. Individuals low and high in neuroticism were asked to fill out questionnaires on either the romantic or the physical aspects of sex. After completing the questionnaires, participants engaged in a word completion task where some of the words could be completed with either death-related or neutral words. The authors hypothesized that neurotic individuals who completed the questionnaire on the physical aspects of sex would have greater access to death-related thoughts than either individuals low in neuroticism or other individuals high in neuroticism who had completed the questionnaire on the romantic aspects of sex. As in Study 1, a median split was conducted on neuroticism scores and a 2 (neuroticism) X 2 (physical vs. romantic sex) ANOVA yielded a significant interaction. Further analysis revealed that individuals high in neuroticism completed more death-related words following the questionnaire on

physical sex than those who completed the questionnaire on romantic sex. The analyses did not reveal any other significant differences.

In the third study of the series, the authors hypothesized that explicitly connecting sex with love would reduce the accessibility of death-related thoughts in individuals high in neuroticism. To test this hypothesis, Study 2 was replicated. However, before completing the questionnaire on either romantic or physical sex, participants were asked to think about either love or eating a good meal. Again, a median split was conducted on neuroticism scores. 2 (neuroticism) X 2 (physical vs. romantic sex questionnaire) X 2 (love or eating) ANOVA was conducted. Further analyses showed that individuals high in neuroticism completed more death-related words after completing the physical sex questionnaire than after completing the questionnaire on romantic sex; additionally, they completed more death-related words after completing the physical sex questionnaire than those low in neuroticism. However, when individuals high in neuroticism were asked to think about love before they completed the questionnaires, this effect disappeared.

In a series of studies, Goldenberg et al. (2006) examined the moderating effects of neuroticism on the relation between mortality salience and physical sensations. In Study 1, researchers examined the effect of mortality salience on performance on a cold-pressor task. They hypothesized that individuals high in neuroticism would perform more poorly after being made to think of their eventual death than would people low in neuroticism. Participants in the mortality salience condition completed questionnaires asking them to a) describe the feelings they experience when they think of their own death and b) what they believe will physically happen to them when they die. Control participants answered a parallel questionnaire concerning failing an important exam. The

cold-pressor task involved participants submerging their forearm in cold water. Participants then completed a questionnaire concerning their subjective evaluation of the cold-pressor task. A multiple regression analysis indicated that there was the expected neuroticism by mortality salience interaction. Participants high in neuroticism in the mortality salience condition spent less time on the cold-pressor task than high neuroticism participants in the control condition.

In Study 2, Goldenberg et al. (2006) sought to replicate the findings of Study 1 with a pleasurable physical task. The basic design of Study 1 was replicated, with an electronic foot massager replacing the cold-pressor task. A multiple regression analysis revealed an interaction between neuroticism and mortality salience. High neuroticism participants spent less time using the massager in the mortality salience condition. Participants low in neuroticism did not spend less time using the massager in the mortality salience condition than those in the control condition.

In an unpublished study conducted by the author of the current study (Merkey, 2009), health anxiety was examined as a moderator of worldview defense following a mortality salience manipulation. The primary hypothesis was that health anxiety would attenuate the effects of mortality salience on worldview defense, based on the premise that health-anxious individuals are chronically more aware of their own mortality. The Illness and Attitudes Scale (IAS) was administered to college students to determine level of health anxiety. Participants were randomly assigned to either a mortality salience or control condition. Worldview defense was measured by participants' reactions to pro- vs. anti-American essays. Because neuroticism had previously been found to be related to both health anxiety (Cox, Borger, Asmundson, & Taylor, 2000) and the effects of TMT

(Goldenberg et al., 1999) neuroticism was assessed using the neuroticism subscale of the Big Five Inventory (BFI; John, Donahue, & Kentle, 1991). A regression model was used to analyze the results, with IAS scores standardized and treated as a continuous measure. As predicted, there was a significant IAS x Condition interaction. However, the direction of the relation was in the opposite direction than hypothesized, with individuals higher in health anxiety engaging in more worldview defense after being reminded of their eventual death than individuals lower in health anxiety. To determine the effects of neuroticism on worldview defense, the neuroticism subscale of the BFI was entered into the regression equations for the control condition and for the mortality salience condition. The unique variance of neuroticism was not significant in either equation.

#### The Effect of Mortality Salience on Affect

DeWall and Baumeister (2007) conducted a series of three experiments to examine the possibility that individuals unconsciously tune in to positive emotional information after exposure to a mortality salience manipulation. They hypothesized that individuals respond to the thought of their own death by unconsciously seeking out or tuning in to positive stimuli. In all three of their experiments, participants in the experimental condition were asked to contemplate their own death, and participants in the control condition were asked to contemplate dental-pain. In their first experiment, they found that participants in the mortality salience condition created more emotionally positive words from word stems than did participants in the control condition. No significant difference was found between the two conditions on the creation of emotionally negative words from word stems.

The second experiment that DeWall and Baumeister (2007) conducted was designed to replicate the first experiment using a different outcome measure. In addition, the second experiment reduced the latency between the presentation of the independent variable and dependent variable that had occurred in the first experiment. Participants were presented with a word and asked to choose which of two additional words was more similar to the first word presented. The choices consisted of a word that was emotionally similar to the target word and a word that was semantically similar to the target word. They found that participants in the mortality salience condition chose the emotionally similar word more frequently than those in the control group when the emotionally similar word had positive connotations.

The third experiment of the series was designed to replicate the results of their first two studies while examining two additional hypotheses (DeWall & Baumeister, 2007). In the first two experiments, participants had been asked to complete a measure of their subjective mood or affect after the experimental manipulation, creating a delay between the manipulation and the respective outcome measures. They dispensed with the delay in the third experiment, hypothesizing that the observed effect concerning positive emotions could be seen immediately. Their second hypothesis was that the tuning in to positive information was something that occurred unconsciously. To test this hypothesis, they created two additional conditions in which participants were asked to write about how they think they would feel if they were asked to write about dental pain or their own death. Each condition was followed by either an implicit (a word stem task) or explicit (Positive and Negative Affect Schedule; Watson, Clark, & Tellegen, 1998, as reported in DeWall & Baumeister, 2007) measure of mood. DeWall and Baumeister (2007)

hypothesized that participants in the imagined mortality salience condition would predict the conscious experience of distress, but would not be able to predict the unconscious coping response of increased tuning to positive affect. A 2 (dental pain vs. mortality salience) x 2 (actual experience vs. imagined) x 2 (implicit mood vs. explicit mood) ANOVA was conducted and yielded a three-way interaction. Further analysis indicated that on the implicit mood measure, subjects in the imagined mortality salience condition predicted that they would experience more emotional distress than participants in the actual mortality salience condition reported experiencing. When the implicit mood measure was examined, participants in the mortality salience condition had a greater index of positive relative to negative emotion than individuals in the imagined mortality salience condition. These results support the researchers' hypotheses that tuning in to positive affective information occurs automatically following mortality salience, and that this process occurred unconsciously.

### Emotion Dysregulation

Problems in emotion regulation, also known as emotion dysregulation, have been associated with disorders such as borderline personality disorder (Gratz et al., 2006; Linehan, 1993), generalized anxiety disorder (Mennin et al., 2007), social anxiety disorder (Mennin et al., 2007), and major depression (Mennin et al., 2007). In addition, high levels of emotion dysregulation have been positively correlated with several problems in adolescents, such as anxiety, depression, and suicidal ideation (Weinberg & Klonsky, 2009). In spite of the implications of emotion dysregulation both clinically and as a growing area of research, there is a lack of consensus among experts on what actually constitutes emotion dysregulation.

Gratz and Roemer (2004) proposed one conceptualization of emotion dysregulation. They developed a multi-faceted model of emotion regulation, theorizing that emotion regulation is composed of competence in four areas: 1) awareness of and understanding of one's emotions, 2) acceptance of one's emotions, 3) the ability to control one's impulses and work toward goals in spite of negative emotions, and 4) the ability to use appropriate and effective emotion regulation strategies to regulate emotional responses, obtain goals, and meet the demands of a situation. A deficit in any of these areas suggests emotion dysregulation. There are, however, alternative conceptualizations of emotion dysregulation. For a description of some of the different proposed definitions of emotion dysregulation, especially as it relates to borderline personality disorder, see Putnam and Silk (2005).

It has been suggested that certain maladaptive behaviors, such as suicidality or self-injury, may serve an emotion regulating function in those who otherwise struggle with emotion dysregulation. For example, Linehan (1993) suggested that in individuals with borderline personality disorder, suicidal behavior may serve as a form of emotion regulation. She suggested that suicidal and other maladjusted forms of behavior are "usually maladaptive solution behaviors to the problem of overwhelming, uncontrollable, intensely painful negative affect" (Linehan, 1993, p. 60). Individuals with borderline personality disorder sometimes report feelings of relief after self-harm behaviors such as cutting oneself (Leinbenluft, Gardner, & Cowdry, 1987, as cited in Linehan, 1993). Additionally, suicidal and parasuicidal behaviors may serve an additional purpose in gaining help from others.



In contrast to Linehan's (1993) proposal that parasuicidal behaviors serve an emotion regulatory function for some individuals, Selby, Anestis, and Joiner (2007) hypothesized that violent daydreaming may be a form of emotion dysregulation in those who are suicidal. They suggested that those who experience violent daydreams may desensitize themselves to violence, making it easier to engage in suicidal or parasuicidal behavior in the future. The researchers used the Beck Depression Inventory, Second Edition (BDI-II; Beck, Steer, & Garbin, 1988, as reported in Selby et al., 2007) as a measure of depression, the Thoughts of Revenge subscale of the Anger Rumination Scale (ARS; Sukhodolsky, Golub, & Cromwell, 2001, as reported in Selby et al., 2007) to measure level of violent daydreaming, and the Beck Scale for Suicidal Ideation (BSS; Beck, Steer, & Ranieri, 1998, as reported in Selby et al., 2007) as the outcome measure of suicidality. They found that the interaction between depression and violent daydreaming significantly predicted level of suicidality above and beyond either measure alone. High levels of both depression and violent daydreaming predicted high levels of suicidality. When these results are examined in the context of TMT, it is possible that asking individuals to contemplate their own death in an experimental manipulation might be akin to what some individuals reported as *violent daydreams*. Asking participants to think about their eventual death might lead to an increase in distress in those prone to emotion dysregulation.

Personality variables, particularly extraversion and neuroticism, have been associated with emotion dysregulation. For example, Kokkonen and Pulkkinen (2001) conducted a longitudinal study that examined extraversion and neuroticism as predictors of later emotion regulation and dysregulation. They hypothesized that extraversion

would be positively associated with future use of emotion regulation strategies, such as low emotional ambivalence, use of emotional social support, and use of “Repair,” which is a “momentary, active attempt to turn a negative emotion toward a more positive direction” (Kokkonen & Pulkkinen, 2001, p. 410). They hypothesized that neuroticism would be negatively associated with those same strategies. They based their hypotheses on previous research demonstrating that extraversion was typically associated with understanding and regulating emotions, whereas neuroticism was associated with traits such as emotional avoidance (see Kokkonen & Pulkkinen, 2001, for a review of the previously existing literature). They found that extraversion was associated with later emotional social support. In women, extraversion was negatively associated with later emotional avoidance. In men, extraversion was negatively related to later level of Repair. Neuroticism was positively correlated with later emotional ambivalence in both men and women. In women, neuroticism was negatively correlated to later emotional social support. In men, neuroticism was negatively correlated to later use of Repair. Due to the correlations between both neuroticism and extraversion with emotion dysregulation, these personality traits were measured and statistically controlled in the current study.

### The Present Study

The purpose of the present study was to examine the relation between emotion dysregulation and Terror Management Theory. How will those who struggle with emotion regulation react when asked to contemplate their own death? Will they react more strongly than others and thus engage in more worldview defense in an attempt to compensate for any negative feelings they might experience in reaction to the manipulation? Or will a high level of emotion dysregulation leave them less able to use

worldview defense as a way to compensate for the loss of self-esteem experienced after contemplating their own death?

No study to date has examined the potential impact of emotion dysregulation on the relationship between mortality salience and worldview defense. The primary hypothesis of the proposed study is that high levels of emotion dysregulation will moderate the previously demonstrated effects of mortality salience on worldview defense. This hypothesis is based in part on the idea that individuals high in emotion dysregulation will experience greater distress than other individuals after contemplating their own death. Providing participants with the opportunity to engage in some form of worldview defense after reminding them of their eventual death may provide them with a means of controlling this emotional dysregulation. In the previously discussed series of studies of studies by DeWall and Baumeister (2007), participants unconsciously sought out or tuned in to positive stimuli following a mortality salience manipulation. Tuning in to positive stimuli might have been an unconscious attempt by participants to regulate their own emotions. The hypothesis of this study is that participants who are already emotionally dysregulated will have a greater need to engage in an emotion regulation strategy following mortality reminders than non-emotionally dysregulated participants.

On the other hand, it is possible that those high in emotion dysregulation will engage in less worldview defense than non-emotionally dysregulated participants following a mortality salience manipulation. Part of the conceptualization of emotion dysregulation, as put forth by Gratz and Roemer (2004), entails an impaired ability to use emotion regulation strategies to regulate emotional responses, obtain goals, and meet the demands of a situation. If worldview defense serves an emotion regulatory function in

those who have been asked to contemplate their own death, those who are high in emotion dysregulation may be less able to use worldview defense to regulate their emotions. Additionally, Linehan (1993) suggested that suicidal and parasuicidal behaviors may serve an emotion regulatory function for some individuals. It is possible that asking individuals high in emotion dysregulation to think about their own death will serve an emotion regulatory function for them, leaving them with less need to engage in worldview defense than non-emotionally dysregulated individuals. However, Selby et al. (2007) suggested that violent daydreaming may actually be a form of emotion dysregulation. It is possible that asking individuals high in emotion dysregulation to think about their own death may increase their emotional distress, leaving them with an increased need to use some method to regulate their emotions.

The first hypothesis examined was that individuals in the mortality salience condition would engage in greater worldview defense than individuals in the control condition. This mortality salience effect would simply replicate previous TMT studies which used methods highly similar to those used in the current study (Greenberg et al., 1992; Kasser & Sheldon, 2000). The second hypothesis tested was that emotion dysregulation would moderate the mortality salience effect. Specifically, individuals higher in emotion dysregulation will engage in greater worldview defense following mortality reminders than those lower in emotion dysregulation. Because neuroticism and extraversion are both associated with emotion dysregulation and because neuroticism has been shown to affect the relationship between mortality salience and a variety of outcomes (e.g., the appeal of the physical aspects of sex; Goldenberg et al., 1999), the effects of these personality variables were statistically controlled for in the analyses.

## CHAPTER II

### METHOD

#### Participants

The participants were 110 undergraduates from the University of Southern Mississippi. The mean age of participants was 21.4,  $SD = 4.3$ , with a range of 18-44. Of the 110 participants, 76.4% were female; 33.6% were Caucasian, 60% were African American, 0.9% were Hispanic or Latino/a, and 4.9% were classified as “other”. The control condition had 54 participants, whom 11 were male. The experimental condition had 56 participants, of whom 15 were male. Their participation was in partial fulfillment of the research participation requirement in their undergraduate psychology courses.

#### Instruments

The Difficulties in Emotion Regulation Scale (DERS; Gratz & Roemer, 2004) was used to assess emotion dysregulation. The DERS is a 36-item self-report instrument designed to assess emotion dysregulation. Although the full DERS is typically used as a measure of the construct of emotion dysregulation, it has six subscales: Nonacceptance, Goals, Impulse, Awareness, Strategies, and Clarity (Gratz & Roemer, 2004). The test-retest reliability of the six subscales ranged from .57 to .80 (Gratz & Roemer, 2004). The initial validation of the measure showed internal consistency ( $\alpha = .93$ ) and good test-retest reliability, which was .88 over a four to eight week period for the overall scale (Gratz & Roemer, 2004). For the present study, the DERS total was internally consistent, with  $\alpha = .92$ .

Neuroticism and extraversion were assessed with the Neuroticism and Extraversion subscales of the Big Five Inventory (BFI; John et al., 1991). The Big Five

Inventory is a 44 item measure of personality that measures the Big Five dimensions of neuroticism, conscientiousness, extroversion, agreeableness, and openness. Three month test-retest reliability for the subscales typically ranges between .80 and .90, and estimates of internal consistency usually fall between .75 and .90. (John & Srivasta, as cited in Clark, Boccaccini, Caillouet, & Chaplin, 2007). For the current study, the neuroticism subscale was internally consistent, with  $\alpha = .83$ . The extraversion subscale was also internally consistent,  $\alpha = .80$ .

Participants' affect was measured using the Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988). The PANAS is a 20 item self-report measure of affect, with 10 of the items forming a positive affect scale, and 10 forming a negative affect scale. The PANAS can be administered with one of several different time periods specified in the instructions to participants (i.e., "indicate to what extent you feel this way right now" or "indicate to what extent you have felt this way today"). For the current study, participants were asked to consider the extent they have felt each emotion during that day. For that time period, internal consistency for each scale has previously been estimated at .90 for the positive affect scale and .87 for the negative affect scale (Watson et al., 1988). For the present study, both scales of the PANAS were internally consistent, with  $\alpha = .89$  for the positive scale and  $\alpha = .83$  for the negative scale.

The dependent variable, worldview defense, was measured using difference scores in preference for a pro vs. an anti-American author. Participants received two essays and were told that these essays were written by foreign students. Essays were handwritten and presentation order was counterbalanced. This measure, or a variation of it, has been used in several terror management studies and has yielded moderately high

effect sizes (Arndt & Greenberg, 1999; Greenberg, et al., 1992; Harmon-Jones, Simon, Pyszczynski, Solomon, & McGregor, 1997). The forms used to evaluate each essay contained three items designed to assess the participants' evaluation of each author. Each question was rated on a 9-point Likert-type scale. The three questions asked the participant to rate 1) how much he or she likes the author; 2) how intelligent the participant believes the author is; and 3) how knowledgeable the participant believes the author to be on the subject. After reading each essay, difference scores were calculated for each individual by subtracting the composite score for the anti-American essay from the pro-American essay.

#### Procedure

For the current study, between one and six individuals participated in each session. Participants were randomly assigned to either the mortality salience or control condition upon their arrival, at which time they were informed by the experimenter that they were participating in two short studies. The first study was described as an assessment of the relationship between personality and reactions to life events. Participants received a folder containing either a mortality salience questionnaire or a control questionnaire that inquires about dental pain. The mortality salience questionnaire asked participants to 1) describe the feelings that the thought of their own death arouses in them and 2) describe what they think will happen to them physically as they are dying and once they are dead. The control questionnaire asked participants to 1) describe the feelings that the thought of experiencing dental pain arouses in them and 2) describe what they think will happen to them physically when they are experiencing this pain. The control condition was chosen in an attempt to create an alternate negative

experience for participants to contemplate in an attempt to control for negative affect. They were given five minutes to write about the scenario they were assigned. Afterward, they completed the BFI, then a demographic form requesting that participants provide their age, race, sex, and year in school. After the completion of the questionnaires, the folders were collected, signaling the end of the first study.

After the participants completed the first study, they were informed that the second study is concerned with Americans' reactions to foreigners' perspectives on the United States. This portion of the study is based on the procedure used in Harmon-Jones et al. (1997, study 2). The participants were asked to read and evaluate two essays, ostensibly written by foreign students, and to evaluate the essays. Each essay was presented in turn, along with the evaluation form. The order of presentation of the two essays was counterbalanced. After participants read and rated each essay, they completed the PANAS and the DERS.

As previously mentioned, this is the second TMT study conducted by this researcher. In the previous study (Merkey, 2009), a manipulation check was conducted after the administration of the mortality salience and control conditions. The results of the manipulation check indicated that the manipulation was quite strong. Virtually all participants in the mortality salience condition indicated that the first study made them think about death while virtually all participants in the control condition indicating that the first study did not cause them to think about their death. Based on the clear results of the manipulation check in that study, a manipulation check was not conducted in the current study.



After the completion of the second study, participants were thoroughly debriefed. Due to the minor deception in this study, participants were asked not to disclose the nature of this study to any other students so that the study was not compromised.

## CHAPTER III

## RESULTS

Prior to examining worldview defense scores, it was necessary to determine if a confound existed between condition and DERS scores. A t-test was conducted to determine whether there were significant differences in DERS score between the mortality salience and control groups. There were no significant differences between groups on the DERS,  $t(107) = 1.48, p = .14$ . For the control group, the mean for the DERS scores was 79.51,  $SD = 18.45$ . For the experimental condition, the mean was 73.91,  $SD = 20.83$ . The zero-order correlations among neuroticism, extraversion, emotion dysregulation, gender, negative affect, and worldview defense are depicted in Table 1. The variables listed in Table 1, with the exception of gender, were tested to ensure that both skew and kurtosis were within acceptable limits; Kurtosis was within acceptable limits of  $\pm 2$  for all variables assessed (see Table 2).

Table 1

*Indicator Correlations*

	Neuro	Extra	W.V.D	E.D.	Gender	NA
Neuroticism	<b>0.83</b>	-.10	0.02	0.72*	0.07	0.46*
Extraversion	-.03	<b>0.78</b>	0.02	-.17	-.09	0.03
Worldview Defense	-.07	0.37*	-	0.03	0.21	-.02
E. Dysregulation	0.50*	0.02	-.16	<b>0.92</b>	-.04	-.62*
Gender	0.03	-.10	-.03	.14	-	0.04
Negative Affect	0.41*	0.00	-.06	0.39*	0.08	<b>0.83</b>

Table 1 (continued).

*Note.* The correlations for the control condition ( $n = 54$ ) are above the diagonal, and the correlations for the mortality salience condition ( $n = 56$ ) are below the diagonal. Alphas for the full sample are in bold along the diagonal. Neuro = Neuroticism, Extra = Extraversion, WVD = Worldview Defense, E.D. = Emotion Dysregulation, NA = Negative Affect.

\* $p < .01$

Table 2

*Means, Standard Deviations, Skew, and Kurtosis*

	Mean	SD	Skew	Kurtosis
Neuroticism	22.74	6.32	.07	-.78
Extraversion	27.78	5.64	.05	-.78
Worldview Defense	4.78	6.35	-.21	1.59
E. Dysregulation	76.63	19.82	.46	-.42
Negative Affect	17.39	7.07	1.37	1.85

Because the current study had a larger percentage of non-Caucasian participants than most previous TMT studies, race was recoded (1 = non-Caucasian, 2 = Caucasian) and a 2 (mortality salience vs. control) X 2 (non-Caucasian vs. Caucasian) ANOVA was conducted, with worldview difference scores as the outcome measure. Race was not significant,  $F(1, 108) = .62, p = .43$ . Additionally, the race X condition interaction was not significant,  $F(1, 108) = .01, p = .92$ .

The main hypothesis that emotion dysregulation will moderate the relationship between mortality salience and worldview defense was analyzed using an ANOVA/regression model. The model included both condition (mortality salience vs. control) and emotion dysregulation, as measured by the DERS, as independent variables.

DERS scores were standardized and treated as a continuous measure. Condition was dummy coded (control = 0, mortality salience = 1), and an interaction term was created by multiplying condition by standardized DERS scores. Condition was then entered into the first step of a regression equation, DERS scores were entered into the second step, and the interaction term was entered in the third step. The difference between participants' ratings for pro vs. anti-American essays served as the dependent variable (i.e., worldview defense).

The overall regression model was not significant,  $F(3, 105) = 1.45, p = .23, R^2 = .04$ . The effect of condition did not achieve conventional levels of significance when entered alone in the first step of the regression equation,  $\beta = .17, t(107) = 1.75, p = .08$ . Therefore, the difference in worldview defense between the mortality salience and control conditions were not quite significant. For the control condition, the mean was 3.70 with  $SD = 6.58$ . For the mortality salience condition, the mean was 5.80 with  $SD = 6.01$ . To determine the effect size of condition, a power analysis was conducted and yielded a result of  $d = .33$ . Additionally, the regression remained non-significant when standardized DERS scores were entered into the second step of the equation,  $\beta = -.07, t(106) = -.73, p = .47$ . Although a significant DERS x Condition interaction was predicted, the interaction was not significant,  $t(105) = -.88, p = .38$  (see Table 3).

A second hierarchical multiple regression was conducted controlling for the effects of neuroticism and extraversion on worldview defense. The neuroticism and extraversion subscales of the BFI were standardized. Condition was then entered into the first step of the regression equation; neuroticism, extraversion, and standardized DERS scores were entered into the second step, and the DERS x Condition interaction term was

entered in the third step. The difference between participants' ratings for pro vs. anti-American essays again served as the dependent variable (i.e., worldview defense). The overall regression model was not significant,  $F(5, 103) = 1.61, p = .17, R^2 = .07$ . When neuroticism, extraversion, and DERS scores were entered into the second step of the model, the regression was non-significant,  $F(4, 104) = 1.75, p = .15$ . In the second step, none of the individual predictors were significant (see Table 4).

Table 3

*Summary of Regression Analysis for Variables Predicting Worldview Defense (N = 110)*

	B	SE B	$\beta$
Step 1			
Condition	2.11	1.21	0.17
Step 2			
Condition	1.98	1.22	0.16
Emotion Dysregulation	-0.45	0.61	-.07
Step 3			
Condition	2.02	1.22	0.16
Emotion Dysregulation	0.17	0.94	0.03
Interaction	-1.02	1.24	-.13

*Note.*  $R^2 = .03$  for Step 1;  $\Delta R^2 = .01$  for Step 2;  $\Delta R^2 = .01$  for Step 3

Table 4

*Summary of Regression Analysis for Variables Predicting Worldview Defense,  
Controlling for Neuroticism and Extraversion (N=108)*

	B	SE B	$\beta$
<b>Step 1</b>			
Condition	2.11	1.21	0.17
<b>Step 2</b>			
Condition	1.91	1.22	0.15
Emotion Dysregulation	-.51	0.76	-.08
Neuroticism	0.24	0.77	0.04
Extraversion	1.10	0.60	0.17
<b>Step 3</b>			
Condition	1.93	1.22	0.15
Emotion Dysregulation	0.34	1.13	0.05
Neuroticism	0.05	0.79	0.01
Extraversion	1.16	0.61	0.18
ED x Condition Interaction	-1.31	1.27	-.15

*Note.*  $R^2 = .17$  for Step 1;  $\Delta R^2 = .08$  for Step 2;  $\Delta R^2 = .02$  for Step 3

*Exploratory Analysis: Neuroticism and Extraversion as Moderators*

To determine the effects of neuroticism on worldview defense, a second hierarchical multiple regression was conducted. The neuroticism subscale of the BFI was

standardized and multiplied by condition to create an interaction term. Condition was then entered into the first step of the regression equation, neuroticism scores were entered into the second step, and the interaction term was entered in the third step. The difference between participants' ratings for pro vs. anti-American essays again served as the dependent variable (i.e., worldview defense).

The overall regression model was not significant,  $F(3, 105) = 1.10, p = .53, R^2 = .03$ . When neuroticism was entered into the second step of the model, the regression remained non-significant,  $\beta = -.02, t(106) = -.23, p = .82$ . Additionally, the Neuroticism x Condition interaction was not significant,  $\beta = .06, t(105) = .50, p = .62$  (see Table 5).

Table 5

*Summary of Exploratory Regression Analysis for Neuroticism as a Moderator of Worldview Defense (N = 108)*

	<i>B</i>	<i>SE B</i>	$\beta$
Step 1			
Condition	2.11	1.21	0.17
Step 2			
Condition	2.07	1.22	0.16
Neuroticism	-0.14	0.62	-.02
Step 3			
Condition	2.07	1.23	0.16

Table 5 (continued).

	<i>B</i>	<i>SE B</i>	$\beta$
Neuroticism	0.14	0.83	0.02
Interaction	-.62	1.25	-.06

Note.  $R^2 = .03$  for Step 1;  $\Delta R^2 = .00$  for Step 2;  $\Delta R^2 = .00$  for Step 3

The same method used above to examine the effects of neuroticism was used to determine the effects of extraversion. When extraversion was entered into the second step of the model, the model was significant,  $F(2, 108) = 3.30, p = .04, R^2 = .06$ . When the interaction term was entered into the third step, the overall regression model remained significant,  $F(3, 105) = 3.45, p = .02, R^2 = .03$  (see Table 6). Although the overall model was significant, none of the coefficients for the predictors were.

Table 6

*Summary of Exploratory Regression Analysis for Extraversion as a Moderator of Worldview Defense (N=108)*

	<i>B</i>	<i>SE B</i>	$\beta$
Step 1			
Condition	2.11	1.21	0.17
Step 2			
Condition	1.99	1.19	0.16
Extraversion	1.12	0.60	0.18



Table 6 (continued).

	B	SE B	$\beta$
Step 3			
Condition	1.99	1.18	0.16
Extraversion	0.13	0.79	0.02
Interaction	2.25	1.19	0.26

Note.  $R^2 = .03$  for Step 1;  $\Delta R^2 = .03$  for Step 2;  $\Delta R^2 = .03$  for Step 3

Finally, to determine if individuals high in emotion dysregulation experienced greater negative affect in the mortality salience condition compared to individuals low in emotion dysregulation or individuals high in emotion dysregulation in the control condition, an additional exploratory regression was conducted. The standardized DERS scores were multiplied by condition to create an interaction term. Condition was then entered into the first step of the regression equation, DERS scores were entered into the second step, and the interaction in the third. The outcome variable was the negative affect scale of the PANAS. When DERS scores were entered into the second step of the model, the model was significant,  $F(2, 108) = 17.66, p = .00$ . When the interaction term was entered into the third step, the overall regression model remained significant,  $F(3, 108) = 12.96, p = .00$ . In the third step, condition was not significant,  $\beta = -.038, t(106) = -.45, p = .67$ ; however, DERS scores were significant,  $\beta = .66, t(106) = 5.11, p = .00$ . The

condition X DERS interaction was not significant,  $\beta = -.22$ ,  $t(106) = -1.71$ ,  $p = .09$  (see Table 7).

Table 7

*Summary of Exploratory Regression Analysis for Condition and Emotion Dysregulation as Predictors of Negative Affect (N=108)*

	B	SE B	$\beta$
<b>Step 1</b>			
Condition	-1.57	1.36	-.11
<b>Step 2</b>			
Condition	-.58	1.20	-.04
Emotion Dysregulation	3.49	0.60	0.49*
<b>Step 3</b>			
Condition	-.53	1.19	-.04
Emotion Dysregulation	4.67	0.91	0.66*
Interaction	-2.06	1.21	-.22

Note.  $R^2 = .01$  for Step 1;  $\Delta R^2 = .24$  for Step 2;  $\Delta R^2 = .02$  for Step 3

\* $p < .01$

## CHAPTER IV

## DISCUSSION

The primary hypothesis for this study was that level of emotion dysregulation would moderate the effects of mortality salience on worldview defense. However, emotion dysregulation was not a significant moderator of mortality salience on worldview defense. In addition, this study failed to demonstrate a main effect of condition; in other words the difference between participants in the mortality salience and control conditions in worldview defense was not quite significant.

Compared to other TMT studies that used similar methodologies, the small-to-medium effect size in the current study was considerably smaller than the effect sizes reported in previous studies. Burke et al. (2010) conducted a meta-analysis on all published TMT studies and reported an average effect size of  $r = .35$  across the studies, which is equal to  $d = .75$ . The average effect size reported in Burke et al. (2010) is roughly twice as large as the effect size in the present study.

It should be noted that this is the second study run by this researcher in which no significant main effects for condition were found. The previous study (Merkey, 2009) with 65 participants, had the same effect size as the current study,  $d = .33$ . There are several potential reasons for this failure to achieve a main effect that has been obtained by other researchers. Some research indicates that a longer latency between the presentation of the independent variable and the worldview defense measure leads to a greater main effect of condition (Burke et al. 2010). Their hypothesis is that defenses triggered by thoughts of death are strongest when the thoughts of death have exited consciousness but are still accessible (Arndt, Greenberg, & Cook, 2002, as reported in

Burke et al., 2010). In Merkey (2009), the delay between the presentation of the independent variable and the worldview defense measure was very brief, perhaps totaling one to two minutes. Although the latency in the present study was not measured, participants completed two measures between the independent variable and the worldview defense measure. The decision to present two measures between the independent variable and the dependent measure was based on the meta-analysis by Burke et al. (2010), which found that the effect size of the worldview defense measure was larger when two or three measures were administered between the mortality salience and worldview defense measures instead of zero or one measure. It is possible that this latency was still not long enough to obtain a main effect of condition.

Another possibility is that there was something specific about the way in which previous researchers have conducted their studies using these particular measures that the current researcher failed to do. Although this researcher made efforts to replicate the methodology used in previous studies, it is possible that something escaped notice. Additionally, the file drawer bias against the publication of null results raises the possibility that other researchers have also obtained non-significant results using the measures employed in this study.

Alternatively, it is worth noting that both the present study and the previous study conducted by this researcher used students from the University of Southern Mississippi as participants. To the best of this researcher's knowledge, the previous study and the present study are the only studies on Terror Management Theory that have been conducted at this University. It is possible that characteristics of this particular sample reduce the MS effect. Although it is difficult to speculate on what these particular

characteristics might be, some possibilities include reading-level, freedom from distractibility, conscientiousness, attitudes toward foreign students, or attitudes toward pro or anti-American sentiments. If Terror Management research is conducted at the University of Southern Mississippi in the future, a preliminary study could be conducted to compare characteristics of students at that university to students at universities used in other Terror Management studies.

The primary hypothesis tested in the current study, that emotion dysregulation would moderate the relation between mortality salience and worldview defense, was also not significant. A possible reason for this lack of effect is that people high in emotion dysregulation did not fully engage in the task. It is possible that they were able to distance themselves from the task (e.g., “I’m not really dying/failing a test. This is just for extra credit”). Gratz et al. (2006) found that individuals with Borderline Personality Disorder (BPD), who are typically high in emotion dysregulation, were less willing to experience emotional distress while pursuing a goal than were individuals without BPD. They also found that individuals with BPD were more likely than those without the disorder to quit a task when they experienced emotional distress. Given these results, it is possible that individuals high in emotion dysregulation *checked out* of the current study when they experienced emotional distress brought on by thoughts of death. They might have written superficially about death to complete the task and gain extra credit for their class without fully participating in the assignment. If this is the case, the failure of individuals high in emotion dysregulation to fully engage in the assignment could have mitigated any effects that may or may not have been present had they fully participated. One way of examining this was to examine the interaction between condition and

emotion dysregulation to determine if individuals high in emotion dysregulation experienced less negative affect in the mortality salience condition than in the control condition. In the present study, although negative affect was related to emotion dysregulation, there was no condition X emotion dysregulation interaction. Another way of potentially examining this in the future would be to examine length of time participants high and low in emotion dysregulation are willing to spend contemplating their own death by allowing participants an open-ended length of time to write about their death.

Additionally, without the main effect of condition typically observed in studies of TMT, it is difficult to say if emotion dysregulation would have moderated the relation between mortality salience and worldview defense. The absence of a main effect of condition calls into question whether the mortality salience manipulation worked. If the manipulation did not work, it makes it difficult to interpret any moderators that either were found or were not found. .

On the other hand, it is possible that emotion dysregulation is truly unrelated to worldview defense following reminders of mortality. Some research indicates that, although emotion dysregulation and negative affect are separate constructs, they are related (Bradley et al., 2011). Similarly, in the present study, emotion dysregulation was a significant predictor of negative affect. Worldview defense following mortality salience has been shown to be unrelated to negative affect in a series of studies (Rosenblatt et al., 1989). It is therefore possible that emotion dysregulation is unrelated to worldview defense as well.

In an exploratory analysis, extraversion and neuroticism were examined as potential moderators of worldview defense. The overall model for extraversion was significant; however, none of the coefficients for the predictors were significant. Future research could explore whether extraversion moderates the relation between mortality salience and worldview defense when a significant main effect of condition is present.

Neuroticism did not significantly moderate worldview defense. Because neuroticism and emotion dysregulation are related constructs, perhaps neuroticism, negative affect, and emotion dysregulation are unrelated to worldview defense following death reminders.

#### Limitations and Directions for Future Research

One of the limitations of the present study was the use of a college student sample instead of a clinical sample of emotionally dysregulated patients (e.g., individuals diagnosed with borderline personality disorder). Although emotion dysregulation is conceptualized as a dimensional construct, it is possible that those at extremely high end of the spectrum would have responded differently when asked to contemplate their own mortality. This could be explored in the future through replication of this study with a clinical sample.

Another potential limitation is this experimenter's repeated failure to duplicate the effect of mortality salience on worldview defense reported by other researchers. Efforts were made to duplicate research methods previously used, including contacting the primary researchers to ensure that the same essays and scales were used for the worldview defense measure. Additionally, the present researcher attempted to reduce error variance by conducting every experimental session herself, using a protocol to

standardize administration between sessions. In spite of these efforts, it is possible that there is something that the present researcher is doing that is somehow attenuating the effects of mortality salience on the outcome measure.

As noted previously, the use of a different manipulation of mortality salience might have been beneficial. Replications of the study using different methods of reminding participants of their mortality could potentially yield different results.

One possible avenue for future research is the analysis of the emotional content of the responses to the IV in the mortality salience condition. As mentioned previously, individuals high in emotion dysregulation might have *checked-out* of the task when asked to write about their own death. Participants' written responses when asked to write about their own death could be analyzed for differences such as word count and emotion-related words. This could be done using a coding system with multiple raters or with a word analysis software program such as Linguistic Inquiry and Word Count (LIWC; Pennebaker, Booth, and Francis, 2007).

The current study represents this researcher's second failed attempt to obtain a main effect when conducting a study using methods fairly standard in Terror Management Theory. Additionally, the primary hypothesis that emotion dysregulation would moderate the effects of mortality salience on worldview defense was not supported. Exploratory analyses examined the moderating effects of neuroticism and extraversion and found that neither was a significant moderator. However, the overall regression model that included extraversion as a moderator was significant; the exploration of the role of extraversion might be an interesting area for future research if and when a main effect of condition is obtained.







## APPENDIX C

## ANTI-US ESSAY

When I first came to this country from my home in XXXXX 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 the rich against the poor. All people care about here is money and trying to have more than other people. There is 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 insensitive to needs and problems of foreigners. It thinks it’s a great country but its not.

## APPENDIX D

## PRO-US ESSAY

The first thing that hit me when I came to this country, was the incredible freedom people had. Freedom to go to school, freedom to work any job you want. In this country people can go to school and train for the job they want. Here anyone who works hard can make their own success. In XXXXX most people live in poverty with no chance of escape. In this country people have more opportunity for success than any other and success does not depend on the group belong to. While there are problems in any country, America truly is a great nation and I don't regret my decision to come here at all.



## APPENDIX F

## INSTITUTIONAL REVIEW BOARD NOTICE OF COMMITTEE ACTION




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**THE UNIVERSITY OF SOUTHERN MISSISSIPPI**


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Institutional Review Board

118 College Drive #5147  
 Hattiesburg, MS 39406-0001  
 Tel: 601.266.6820  
 Fax: 601.266.5509  
 www.usm.edu/irb

**HUMAN SUBJECTS PROTECTION REVIEW COMMITTEE  
 NOTICE OF COMMITTEE ACTION**

The project has been reviewed by The University of Southern Mississippi Human Subjects Protection Review Committee in accordance with Federal Drug Administration regulations (21 CFR 26, 111), Department of Health and Human Services (45 CFR Part 46), and university guidelines to ensure adherence to the following criteria:

- The risks to subjects are minimized.
- The risks to subjects are reasonable in relation to the anticipated benefits.
- The selection of subjects is equitable.
- Informed consent is adequate and appropriately documented.
- Where appropriate, the research plan makes adequate provisions for monitoring the data collected to ensure the safety of the subjects.
- Where appropriate, there are adequate provisions to protect the privacy of subjects and to maintain the confidentiality of all data.
- Appropriate additional safeguards have been included to protect vulnerable subjects.
- Any unanticipated, serious, or continuing problems encountered regarding risks to subjects must be reported immediately, but not later than 10 days following the event. This should be reported to the IRB Office via the "Adverse Effect Report Form".
- If approved, the maximum period of approval is limited to twelve months.  
 Projects that exceed this period must submit an application for renewal or continuation.

**PROTOCOL NUMBER: 28041405**

**PROJECT TITLE: Does Health Anxiety Moderate the Effects of Mortality Salience on Worldview Defense?**

**PROPOSED PROJECT DATES: 03/24/08 to 03/24/09**

**PROJECT TYPE: Dissertation or Thesis**

**PRINCIPAL INVESTIGATORS: Toni Merkey**

**COLLEGE/DIVISION: College of Education & Psychology**

**DEPARTMENT: Psychology**

**FUNDING AGENCY: N/A**

**HSPRC COMMITTEE ACTION: Expedited Review Approval**

**PERIOD OF APPROVAL: 04/14/08 to 04/13/09**

  
 \_\_\_\_\_  
 Lawrence A. Hosman, Ph.D.  
 HSPRC Chair

4-17-08  
 \_\_\_\_\_  
 Date

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