College students' perceptions of Muslim-Americans after the 2013 Boston Marathon bombings

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ABSTRACT

This paper focuses on a study that determined if empathy was related to forgiveness of Muslim Americans among non-Muslim college student participants. College students were asked to view a media report regarding the 2013 Boston Marathon bombings which were conducted by homegrown Muslim American terrorists. 171 undergraduate college students were sampled within this study. Empathy and forgiveness were measured, whereas mortality salience was imposed among the sample. It was determined that there among undergraduate college students, there was a positive, significant relationship among empathy and forgiveness. None of the following factors (i.e., age, gender, ethnicity, race, major, and undergraduate level) were show to statistically moderate the relationship among empathy and forgiveness.

Keywords**:** 2013 Boston Marathon Bombings, Empathy, Forgiveness, Muslim-American Perceptions, Terror Management

INTRODUCTION

The 2013 Boston Marathon bombings were perpetrated by "homegrown" Muslim American terrorists (Chuang & Roemer, 2013; Gunaratna & Haynal, 2013) and we have seen an increase in intergroup conflict. There has been an escalation between Muslim Americans, those Americans either born into or converted to Islam (Amer & Bagasra, 2013) and the broader non-Muslim American population (Gunaratna & Haynal, 2013; Speckhard, 2013). In the decade since the September 11th, 2001, terrorist attack on the World Trade Center in New York City, commonly referred to in the literature as 9/11 (Das, Bushman, Bezemer, Kerkhof, & Vermeulen, 2009), homegrown terrorism has evolved from a peripheral issue to a major theme in contemporary debates about the terrorist threats facing the U.S. (Zuckerman, Bucci, & Carafano, 2013).

Muslim Americans "are the most racially diverse religious group surveyed in the United States" (Younis, 2009); as well as culturally diverse (Amer & Bagasra, 2013). Despite the great diversity among Muslim Americans, these citizens are often identified as a "social outgroup"--an atypical social group subjected to negative opinions and hostile attitudes (Dovidio, Gaertner, & Kawakami, 2003), that are sympathetic to terrorism.

Empathy has been established in current research as a significant variable for increasing the willingness to forgive outgroup members involved in violent intergroup conflicts for their past misdeeds (Vaes, Leyens, Paladino, & Miranda, 2012). Concurrently, alternate research has stated that outgroup suffering (i.e. Americans of Black race) produced low empathic responses in comparison to ingroup suffering (i.e. Americans of White race) (Cikara, Bruneau, & Saxe, 2011). Further, it has been found that empathy within college students has actually decreased over time and current reflects "a diminishingly empathic society" (Konrath, O'Brien, & Hsing, 2011, p. 191). While researchers contemplate the role of empathy, it is relevant to examine its precise role in intergroup conflict as the "U.S. has been continuously plagued with violence" (McDowell-Smith, 2013) associated with the real or perceived threat of Muslim terrorist activity (Niesta, Fritsche, & Jonas, 2008; Rothschild, Abdollahi, & Pyszczynski, 2009). The current research focuses on the ongoing religious intergroup conflict between non-Muslim Americans and Muslim-Americans, who are often identified with homegrown Muslim terrorists (Jung, 2012; Zuckerman et al., 2013).

Background

While the actual threat of Muslim American terrorism may not always be especially serious or growing, overstating the homegrown threat has fed a climate of fear and misunderstanding between Muslims and other Americans (Brooks, 2011). Homegrown terrorism focuses on the following main ideas: 1) individuals are born in, raised in, or have a strong attachment to the West; and 2) individuals and groups act on their own without taking military orders from abroad, thus becoming self-recruited, self-trained, self-radicalized, and self-started (Crone & Harrow, 2011). Due to the overstated assumptions in mainstream sociopolitical discourse that Muslim residents or citizens of the U.S. represent a serious and growing terrorist threat to American society, particularly in their supposed willingness or capacity to execute deadly attacks in the U.S. (Brooks, 2011), Muslim Americans are now considered a prominent

outgroup inside of the U.S. (Amer & Bagasra, 2013; Cashin, 2010; Chuang & Roemer, 2013; Saleem & Anderson, 2013).

Demographically, there is no singular, unitary "Muslim" group that can represent the experiences and grievances of the many Americans who identify as Muslim. Muslim Americans come from various racial and ethnic backgrounds, hold diverse political viewpoints, and adopt beliefs ranging from staunch secularism to religious orthodoxy (Amer & Bagasra, 2013; Aziz, 2012). As an identified social outgroup in the extant literature, Muslim Americans have often been subjected to negative experiences such as surveillance, hate crimes, and institutional discrimination (Amer & Bagasra, 2013) within social venues, such as workplaces (Ghumann & Ryan, 2013; King & Ahmad, 2010) and universal orientation within U.S. culture (Khan & Ecklund, 2012). Negative Muslim stereotypes such as "intrinsically intolerant and violent" (Giger & Davidhizar, 2002) are often propagated by the media (Ogan, Willnat, Pennington, & Bashir, 2014) and are commonly associated with with violence and terrorism, disseminating the stereotype that all Muslims are involved with terrorism (Saleem & Anderson, 2013).

A recent example of violent Muslim terrorism activity is the 2013 Boston Marathon bombings, when several "homegrown terrorists" (Chuang & Roemer, 2013; Gunaratna & Haynal, 2013) kindled two makeshift explosive devices towards the finish line of the Boston Marathon. A total of 254 individuals were injured, whereas three individuals were killed (Gunaratna & Haynal, 2013). The perpetrators, the Tsarnaev brothers, had been unable to fully assimilate within U.S. culture (Speckhard, 2013). They justified the bombings through jihadist motivations and it was determined that the online al-Qaeda magazine, *Inspire,* influenced their ultimate decision to carry out the act (Perlmutter, 2013).

The U.S. media has strongly upheld western beliefs which has created a culture of fear of Islam, and has depicted the U.S. as a righteous Christian nation (Powell, 2011). Media reporting within the U.S. has increased death-related thoughts and thus drives individuals to implement their own worldviews—in this context, worldviews regarding Muslim Americans (Cashin, 2010; Das et al., 2009; Ogan et al., 2014; Powell, 2011). Perceptions of threats and current intergroup conflict contribute to how Americans view Muslims. When adversarial groups compete over resources, intergroup conflict develops (Shnabel, Halabi, & Noor, 2013). The U.S. has historically been plagued by persistent intergroup conflicts, including racial bias of whites against other racial minorities, such as African-Americans and conflict associated with Muslim terrorist activity (Cashin, 2010).

The propagation of negative Muslim stereotypes by the U.S. media has fed Americans' perceptions of threats, fueling the current intergroup conflict. Terror Management Theory (TMT) explains as individuals are threatened (whether physically or mentally), they utilized their cultural worldviews to assist in their individualized conceptions of reality (Pyszczynski, Rothschild, & Abdollahi, 2008). TMT is based on the concept that biologically, predisposed individuals have cognitive thoughts related to the realization that death will occur over an individual's life span. Death-related thoughts, also known as mortality salience, can potentially lead to severe dread which can be suppressed through cultural worldviews (Becker, 1973; Das et al., 2009; Jonas et al., 2008). Further, TMT maintains that individuals use their unconscious mind to manage their own thoughts of mortality (Jonas et al., 2008). Cultural worldviews create explanations for reality and can support both positive and negative individual behaviors.

Few scholars have explored individual traits that can allow individuals to socially handle mortality salience in a constructive manner (Schimel, Wohl, & Williams, 2006; Vail et al., 2012) and no studies have specifically addressed the role age plays in regards to mortality salience.

The Heuristic Model of Positive Terror Management (HMPTM) displays the positive literature associated with mortality salience and outgroups (Vail et al., 2012). Within this literature, prosocial values are suggested to help facilitate a culture with socially constructive goals and to help regulated intergroup relations. Prosocial values can promote equality, compassion, empathy, dictate self-worth and self-esteem (Schimel et al., 2006; Vail et al. 2012).

> HMPTM constructs the foundation for the following assertion: If individuals are empathic, then these individuals should be more kind and forgiving toward those identified with transgressors (Rothschild et al., 2009)—as in the case of Muslim Americans who share a religious affiliation with Muslim American terrorists (Gillum & Wilson, 2012) (McDowell-Smith, 2013, p.376).

Theories Explored in Depth

The foundational theory of TMT is based upon the work of Ernest Becker (1973) and claims that the denial of death-related thoughts is common among all individuals. These thoughts create a pervasive anxiety in regards to both an individual's physical and psychological behavior (Jonas et al., 2008). When cultural worldviews and self-esteem are created, a psychological anxiety buffer is then established which allows individuals to cope with death-related thoughts (Das et al., 2009; Pyszczynski et al., 2008).

Cultural worldviews within individuals can create both positive and negative individual behaviors. Some examples of positive individual behaviors influenced by cultural worldviews include promoting physical health and building positive, peaceful relationships (Schimel et al., 2006; Vail et al., 2012). Examples of negative individual behaviors include hostility, prejudice, and stereotypes towards outgroups within society (Das et al., 2009; Jonas & Fritsche, 2013). Mortality salience can serve as a "built-in catalyst of hostile interaction" (Niesta et al., 2008), which can lead to continuous violence within society (Jonas & Fritsche, 2013). Jonas and Fritsche (2013) constructed a diagram to illustrate how an existential threat can lead to either escalation or de-escalation of hostile behavior.

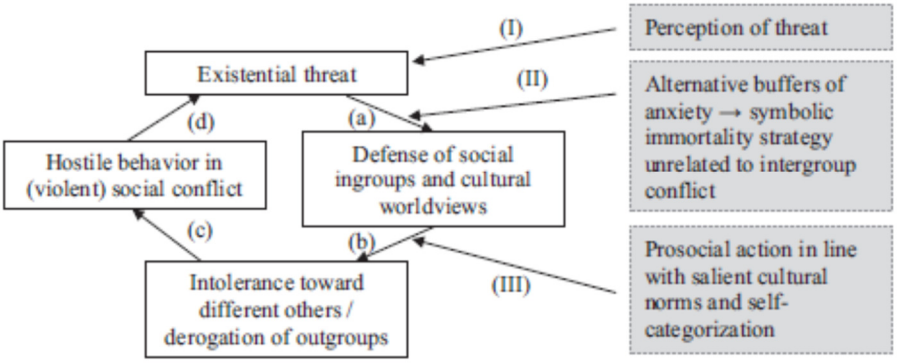

Figure 1. A Terror Management Model of Escalation (Paths a–d) and De-Escalation (Paths I–III) of Violent Intergroup Conflicts. Adapted from "Destined to Die but not to Wage War: How Existential Threat can Contribute to Escalation or De-Escalation of Violent Intergroup Conflict," by E. Jonas and I. Fritsche, 2013, American Psychologist, 68(7), p. 544.

Since mortality salience is inherent in most violent intergroup conflicts, it encourages people to support and defend their cultural worldview (see Figure 1, Path a), which then

increases their hostility towards the outgroup (See Figure 1, Path b and c), followed by increasing their level of mortality salience (See Figure 1, repeat Paths a–d). Research has shown that when individuals are exposed to an existential threat, they are more likely to consider violent solutions during times of war and/or during a terrorist attack (Hirschberger, Pyszczynski, & Ein-Dor, 2009). While intergroup conflict may appear to be an endless vicious cycle, there are pathways of hope which display socially constructive ways to handle intergroup conflict (see Figure 1, Paths I–III) (Jonas & Fritsche, 2013). For instance, mortality salience does not necessarily have to elicit any social behavior response (see Figure 1, Path I); it can be reduced by anxiety-buffering strategies unrelated to intergroup conflict (see Figure 1, Path II). Furthermore, prosocial behavior can occur based on compliance with social norms and self-categorization (see Figure 1, Path III) (Jonas & Fritsche, 2013). Jonas and Fritsche (2013) provide a basic model of positive ways to manage mortality salience as detailed in TMT, which supports the Heuristic Model of Positive Terror Management (HMPTM) (Vail et al., 2012).

Vail et al. (2012 developed the HMPTM (as shown in Figure 2) which provided the beneficial trajectories of TMT research. Building upon the premise of TMT, the HMPTM "defines 'positive' terror management outcomes as existentially motivated attitudes or behaviors that minimize harm to oneself and others, and promote well-being in physical, social, and psychological domains" (Vail et al., 2012, p. 305). Yet this definition of positive trajectories comes with three critical caveats: (1) terror management buffers are essential in reducing anxiety in mortality salience situations; (2) any response to mortality salience—even outwardly positive ones—can have the potential to develop negative psychological repercussions; and (3) the definition of positive behavior within HMPTM is objective, despite the varying degrees of subjectivity regarding all behavior (Vail et al., 2012).

The caveats within HMPTM are crucial to understand, as they help construct the backbone to HMPTM. Without terror management buffers to assist in the reduction of anxiety, severe anxiety, depression, and even lack of self-regulation can occur (Vail et al., 2012). Further, even positive responses to mortality salience can have negative psychological repercussions if taken to the extreme. For example, an individual can love someone deeply but if that love becomes misdirected or begins to hurt the individual psychologically, it becomes a negative repercussion (Vail et al., 2012). And lastly, positive behavior/responses are objective, but generally "have the potential to foster physical health, the well-being of people inside and outside one's community, or facilitate individuals' self-enrichment and personal growth" (Vail et al., 2012, p. 4).

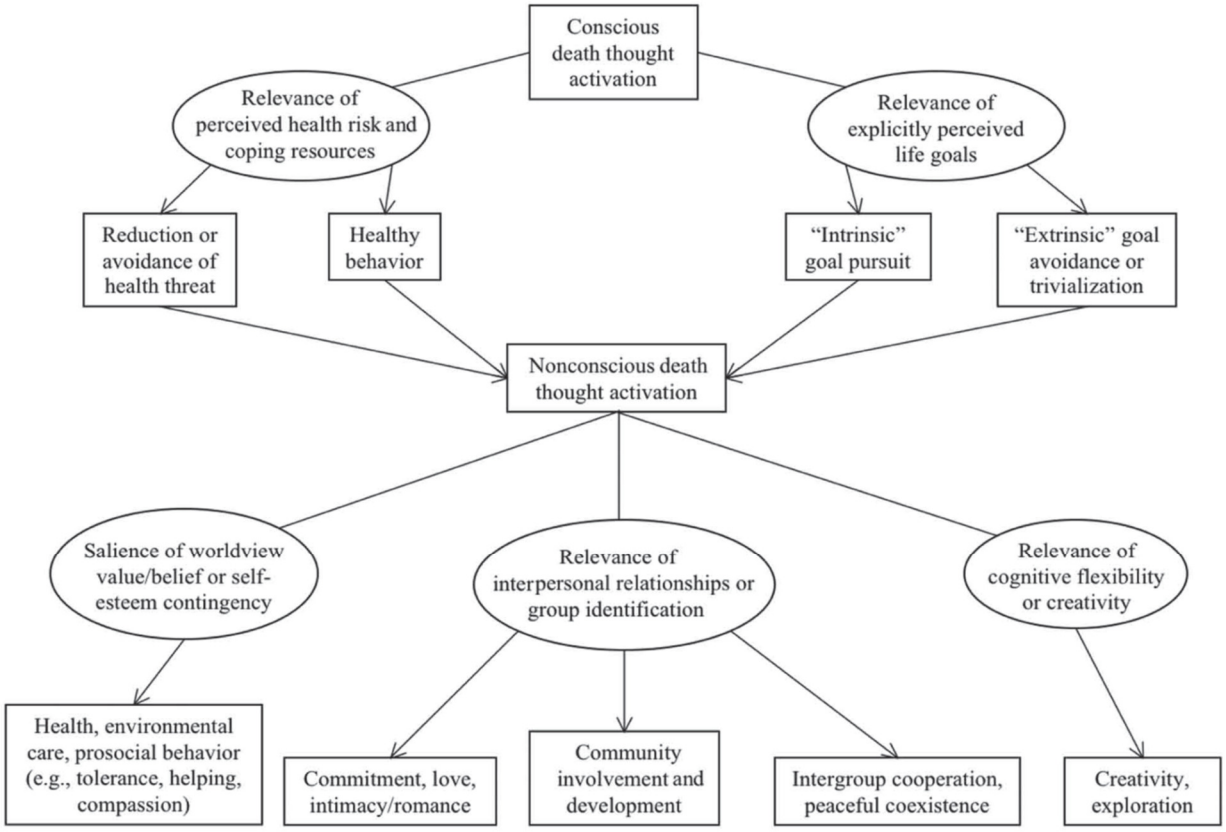

Figure 2. The Heuristic Model of Positive Terror Management. Adapted from "When Death is Good for Life: Considering the Positive Trajectories of Terror Management," by K. Vail, III., J. Juhl, J. Arndt, M. Vess, C. Routledge, and B. Rutjens, 2012, *Personality and Social Psychology Review, 16*(4), p. 307.

Statement of the Problem

"In ethnically and religiously diverse communities across the U.S., religion-related intergroup conflict is escalating between the majority ingroup of non-Muslim Americans and the Muslim Americans minority outgroup" (McDowell-Smith, 2014), who are often identified with homegrown Muslim terrorists (Jung, 2012; Zuckerman et al., 2013). The current research fails to clearly establish the role of empathy in forgiving religious outgroups (Shnabel et al., 2013; Vaes et al., 2012; Cikara et al., 2011) and thus needs to be investigated further. Schimel et al. (2006) and Vaile et al. (2012) claim that "the development of prosocial values within a culture could facilitate socially constructive goals, specifically related towards intergroup relations" (McDowell-Smith, 2013). The current research focuses on the ongoing religious intergroup conflict between non-Muslim Americans and Muslim-Americans, who are often identified with homegrown Muslim terrorists (Jung, 2012; Zuckerman et al., 2013). More specifically, we sought to determine if those college students that viewed a media report about the Boston Marathon bombings (carried out be homegrown Muslim American terrorists) distributed a relationship among empathy and forgiveness of Muslim Americans.

Research Method and Design

This study derives its theoretical framework from TMT and HMPTM, which clarify the relationships amongst the predictor variable (empathy), the control variable (mortality salience), and the outcome variable (forgiveness). Through the application of a regression research design, the study was able to predict the value of the dependent variable from the observed independent variable, while controlling for other factors all in a single model. Further, regression analysis allowed the researcher to control the variance through the use of control variables based on the variables of main importance created through the research questions. The objective in this study was not to show causal relationships between variables but to investigate the relationship of continuous and dichotomous variables.

Population & Sample

The population for the study consisted of non-Muslim undergraduate students attending a 4-year state university in Worcester, Massachusetts (approximately 45 miles west of Boston, Massachusetts). The population only contained those students who self-identified as non-Muslim Americans. The entire undergraduate student body enrolled at the 4-year state university—including students identifying as Muslim—was predominantly Caucasian (74.7%; U.S. Department of Education, 2012). The total undergraduate enrollment at this school was 5,307. Approximately 7% were Hispanic, 3.4% were Asian, 5.6% were African American, and 9% belonged to other races and ethnicities. Females comprised 60.3% of the student population of the 4-year state university (U.S. Department of Education, 2012). Nearly 77% of its students were 24 years old or younger, with 23% of its students 25 years old or older (U.S. Department of Education, 2011).

Study participants included 171 undergraduate students enrolled in the selected 4-year state university who identified themselves as non-Muslim Americans (in order to control for the ingroup as referenced earlier). The majority of the participants were undergraduate criminal justice majors based upon the convenience and efficiency of completing this study. The selection of courses depended on the permission granted by the course department chair and instructor of each specific class to allow the researcher access to their students. All students within the approved courses were provided with a copy of the study's consent form, which further described the nature of the study and also discussed how participation in the study was completely voluntary. Inclusion and exclusion criteria were presented within the consent form, specifically the inclusion requirement of considering themselves non-Muslim American and exclusion requirement if participants answer yes to the following question: "Have you or anyone you know been negatively affected by the 2013 Boston Marathon Bombings?" The study had an inclusion requirement of individuals considering themselves non-Muslim Americans so that the ingroup could be established. An exclusion requirement was presented to assist in reducing any potential harm to the participants, as it was anticipated that if someone was directly involved with the 2013 Boston Marathon Bombings, it may bring up some strong, negative feelings.

Operational Definition of Variables (Including Instruments Utilized)

The study included three operational variables: mortality salience, trait empathy (Davis, 1980, 1983), and forgiveness. Empathy was the independent or predictor variable and forgiveness was the outcome or dependent measure, while controlling for mortality salience (Davis, 1980, 1983). An operational definition for each variable, and a description of the survey instruments used to measure them, is described below:

Mortality salience

Mortality salience acted as a controlled variable and was administered by the researcher to all participants. It was the responsibility of the researcher to properly induce mortality salience as used in previous terror management research. In order to stimulate mortality salience, the participants were first asked to read "Jahar's World" from the August 2013 Issue of *Rolling Stone*. This magazine article—particularly its cover photo—elicited a strong political reaction when it was first released (Taibi, 2013). Because of this, only two pages of this 36-page article were chosen for the current study, as they contained just the factual events of the 2013 Boston Marathon bombings and the life stories of the terrorist bombers without the remaining editorial commentary (Das et al., 2009; Iyengar & Kinder, 1987). Participants did not have access to the cover photo, magazine title, or any further indicators associated with the source of the magazine article in order to create objectivity within study. Then, participants were asked to respond to the following questions: "Briefly describe the emotions that the thought of your own death arouses in you" and "Jot down, as specifically as you can, what you think will happen to you physically as you die and once you are dead" (Schimel et al., 2006). Upon completion of these questions, participants were then administered filler items taken from the Self-Monitoring Scale (SMS) (Snyder, 1974) in order to serve as the delay between mortality salience and the dependent measure of forgiveness. The SMS consists of 25 items, which measure an individual's personality and can be answered as true or false (Snyder, 1974). For purposes of this study, the data collected for the SMS was not evaluated, as this survey was only used to serve as a delay between the issuance of mortality salience and the measurement of forgiveness, as used in prior TMT research (Schimel et al., 2006).

Trait empathy

Trait empathy was the independent variable and an ordinal-level variable operationally defined as the mean score within *each* of the four subscales of the Interpersonal Reactivity Index (IRI) (Davis, 1980, 1983). The IRI is a multidimensional self-report inventory, consisting of 28 items that measure levels of empathy on a 5-point Likert-type scale, ranging from "*does not describe me well*" to "*describes me well*." Trait empathy is measured through a multidimensional approach with the use of four subscales consisting of the following: perspective-taking, fantasy, empathic concern, and personal distress (Davis, 1980, 1983). It is scored by reverse-coding the negative items and then adding the sum of all questions for each individual subscale, with higher scores representing higher trait empathy (Davis, 1980, 1983). It is not possible to sum all four IRI subscales, as the four subscales are not all positively correlated (Davis, 1980, 1983). As a result, only one subscale from the IRI—empathic concern—was included in the current study. Empathic concern was chosen as the particular subscale for this study, as it was the only subscale that specifically examined how individuals assessed their feelings of sympathy and concerns for "others".

Forgiveness

Forgiveness was the dependent variable. Measured on an ordinal scale, it was operationally defined as the mean score within *each* of the subscales for the Forgiveness Scale (FS) (Rye et al., 2001). The FS is a self-report inventory, consisting of 15 items that measure levels of forgiveness on a 5-point Likert-type scale, ranging from 1 (*Strongly disagree*) to 5 (*Strongly agree*). It is scored by adding rating scores based on reverse coding, with higher scores for positive subscale representing a greater willingness to forgive wrongdoings and higher scores for negative subscale representing a lower willingness to forgive wrongdoings. The forgiveness scale was administered twice within this study; once as a pre-test and once as a post-test. The rationale for administering a pre and post-test was to measure the level of empathy an individual had prior to completing the study. It was anticipated that individuals would distribute higher levels of forgiveness in the post-test as a result of empathetic concern; yet it was crucial to determine what level of forgiveness the individuals had exhibited prior to the completion of the study.

Data Collection

Students had the opportunity to accept participation in the study or elect to sit quietly while the remaining students complete the study. All students within the approved courses were provided with a copy of the study's consent form by the researcher, which further described the nature of the study. Upon reading and agreeing to the consent form, all study participants had to sign a consent form, which described the purpose of the research, duration of the study, benefits to the individual, potential risks of the study (personally sensitive questions about death-related thoughts), voluntary nature of participation, and confidentiality. Upon completion of the signed consent form, participants were asked to complete the initial forgiveness pre-test (Rye et al., 2001).

A week later, the researcher returned and asked all study participants to complete the remainder of the study. During the remainder of the study, participants were asked to initially complete the trait empathy survey (Davis, 1980, 1983). A screening question was then presented to the participants in regards to whether they had read any magazine articles associated with the 2013 Boston Marathon Bombings. The participants were given six choices regarding different magazine/newspaper sources that published information on the 2013 Boston Marathon Bombings (including one option for participants to write in a source not listed). *Rolling Stone* was one source option provided to the participants.

The ultimate goal was to achieve 95% of participants who had not viewed the *Rolling Stone* article associated with the 2013 Boston Marathon Bombings. It was relevant to obtain a majority of participants who had not viewed the *Rolling Stone* article because if they read the article, they could potentially hold a predisposed bias against the article based upon all of the critique of the publication of the article through various news and media sources (Taibi, 2013). Upon completing the screening question, participants were then directed to read the two-page excerpt of the magazine article associated with the 2013 Boston Marathon bombings entitled "Jahar's World" from the August 2013 Issue of *Rolling Stone*; answer open-ended questions regarding their mortality salience; and complete the forgiveness survey, which was customized to specifically address forgiveness towards all Muslim Americans (Davis, 1980, 1983).

Data Analysis

SPSS was used to analyze the data. Initially, the data were screened for outliers, normal distributions, linearity, and equality of variances. Regression analysis was conducted to examine the relationship between empathy of non-Muslim American and forgiveness towards Muslim Americans when mortality salience is triggered. The ordinal variables of empathy and forgiveness (as measured with Likert-type scales) were treated as interval-level variables for data analysis. Likert-type scales are commonly used to measure attitude, providing a range of responses to a given question or statement. The assumption will be made here that Likert-type categories constitute interval-level measurement. Even though the interval nature of individual items has been debated, it is generally accepted that the summed scale score may still be of the interval type, for the sum may be insensitive to the violation of interval assumption at item level (Liung, 2011). Descriptive statistics and regression analysis options were executed and the results were summarized and presented in a tabular form. Regression analysis allowed for the examination of relationships between empathy and forgiveness while controlling for mortality salience.

Assumptions

Several assumptions were made in the study. It was assumed that the survey material was comprehended and completed in an honest and efficient manner by the intended individual selected to participate in the study. The study was also based on several theoretical assumptions consisting of the reliability of HMPTM proposed by Vail et al. (2012). It was further assumed that data obtained from the SMS, IRI, and FS would serve as valid and reliable measures reflecting the theoretical underpinnings of HMPTM (Davis, 1980, 1983; Rye et al., 2001; Snyder, 1974). HMPTM is a relative new model that encompasses the positive research associated with TMT; therefore, the instruments utilized in the study have been proven to be valid and significant based on prior scholarly research. The interrelatedness of empathy and forgiveness has been hypothesized in prior scholarly research (Motyl et al., 2011; Niesta et al., 2008) and was assumed in the study. Additionally, it was assumed that a quantitative method would be optimal for investigating the relationship of empathy and forgiveness, while controlling for mortality salience. The sample size of the study was 171, and it was assumed that it would be sufficient to determine any statistical significant results with at least an 80% probability (Faul, Erdfelder, Buchner, & Lang, 2009).

Limitations

The sample utilized in the study consisted of undergraduates attending a 4-year university in Worcester, Massachusetts, which is approximately 45 miles west of Boston, Massachusetts. Since the 2013 Boston Marathon bombings occurred in Boston, Massachusetts, it was likely that the sample was biased based on their close proximity to these events. Also, since the study only sampled undergraduate students at one Massachusetts school, the results of the study were not generalizable since they could vary among different states or countries upon replication. Additionally, in quantitative research design, the data may lack depth and fail to fully capture the individual experiences of each participant. Lastly, the study was correlational and causality was not determined. Despite these limitations, the quantitative research method and the associated

regression design were appropriate for identifying any potential relationships among the variables and for providing an answer to the stated research question.

Demographics

A total of 188 undergraduate students enrolled in the selected 4-year state university were asked to participate in the study. All potential participants were asked to voluntarily complete basic demographic questions, multiple surveys, and a short reading. The study was conducted over two courses a week apart so that a forgiveness pre-test could be conducted. Of the 188 participants, one was excluded to mitigate potential psychological risk and 16 were excluded because their questionnaires were incomplete due to failure to attend the second part of the study. Therefore, there was a response rate of approximately 91%, with a total of 171 participants whose responses were included in the data analysis. Table 1 provides the age and gender distributions of the 171 participants.

Table 1: Demographic Distributions: Gender and Age

Age	Male	Female	Total
17-20	56 (32.8%)	32 (18.7%)	88 (51.5%)
21-24	50 (29.2%)	26 (15.2%)	76 (44.4%)
25-40	6 (3.5%)	1 (.6%)	7 (4.1%)
Total	112 (65.5%)	59 (34.5%)	171 (100.0%)

The majority of the participants (65.5%) were male. The ages ranged from 17 to 40 (M = 20.5, SD = 2.5), with the largest group (51.5%) between 17 and 20, followed by the second largest group (44.4%) between 21 and 24. Other demographics of noted importance within the study were ethnicity (91.2% Not of Hispanic, Latino, or Spanish Origin), race (78.5% White), undergraduate major (85.4% Criminal Justice), and year in college (fairly equally distributed among all four years).

The demographics of this study sample (78.6% Caucasian) accurately reflected that of the wider school population (74.7% Caucasian) according to the U.S. Department of Educations (2012) statistics. The vast majority of the study participants (95.9%) were below 24 years of age, in comparison to the total population of 77% below 24 years old. Another deviation from the vast population of the university was the sex of the students, as only 34.5% of the study participants were females in comparison to the 60.3% of females that comprise the entire student population.

Hypothesis Testing

Prior to any evaluations of the data, all data were entered into SPSS according to the proper reverse coding as indicated in the creation of the original instruments. The data were evaluated for normality and equality of variances. The distribution of the residuals was normal, and the variances were equal. Based on the normal distribution and equal variances, parametric statistics were therefore used for the data analysis.

Regression analysis was conducted to examine the relationship between empathy of non-Muslim American and forgiveness towards Muslim Americans when mortality salience is

triggered. The four main statistical assumptions met for the regression analysis of this study were as follows: 1) Variables are normally distributed; 2) There is a linear relationship between the independent and dependent variable(s); 3) Variables are measured without error; and 4) Homoscedasticity (Fox, 2008).

The study successfully satisfied all of the above assumptions in regards to regression analysis prior to conducting the parametric statistical tests. The data were evaluated for normality and equality of variances. The distribution of the residuals was normal, as determined by P-P plots and variances were equal, as determined by a scatterplot.

Mean, minimum, and maximum scores were computed for trait empathy (empathetic concern subscale only), including a breakdown by gender. The results are shown in Table 2.

Table 2: Trait Empathy (Empathic Concern) - Mean, Minimum, and Maximum, by Gender

		Empathy Sum				
		Total N	Mean	Standard Deviation	Minimum	Maximum
Gender	Female	59	19.42	4.98	4.00	28.00
	Male	112	16.61	4.28	5.00	25.00
	Total	171	17.58	4.71	4.00	28.00

The female participants displayed a higher level of empathy and were significantly different, with a mean of 19.42 compared to males with a mean of 16.61. Also, the female participants displayed the maximum score of 28 for empathy, meaning that some of the female participants displayed the highest level of empathy possible according the IRI; whereas the highest level of empathy the males scored was 25.

Mean scores were also computed for both pre-forgiveness and post-forgiveness, including a breakdown by gender. Table 3 shows the results for both pre-forgiveness and post-forgiveness.

Table 3: Pre- & Post-Forgiveness: Mean by Gender

		Total N	Pre-Forgiveness Mean	Post-Forgiveness Mean	Difference between Pre- & Post-Forgiveness
Gender	Male	112	45.85	46.12	+.27
	Female	59	48.15	50.31	+2.16
	Total	171	46.64	47.57	+.93

Both male and female participants displayed increased levels of forgiveness between the pre-forgiveness test and the post-forgiveness test. The females had the highest positive level of change (+2.16) in regards to higher levels of forgiveness between the pre-forgiveness test and the post-forgiveness test.

In order to answer the research problem specified, Pearson product-moment coefficient was computed to determine the relationship between empathy and forgiveness. The study assumed a two-tailed test with an alpha error probability of .05. It was determined that the relationship between trait empathy (empathetic concern) and forgiveness was significant with $r(171) = .225$, $p = .003$. As the level of empathy increased in undergraduate college students, the level of forgiveness towards Muslim Americans also increased.

Additional multiple linear regression analyses were conducted to determine the extent to which the relationship between empathy and forgiveness was moderated by the following factors: age, gender, ethnicity, race, major, and undergraduate level. Three terms were entered into each regression analysis: *Factor*, empathy, and *Factor* x Empathy, representing the interaction between the two predictor variables. These analyses assumed a two-tailed test with an alpha error probability of .05, a sample size of 171 (159 for race factor), and three predictors. Table 4 shows a simplified summary of the results of the regression analyses.

Table 4: Summary of Moderated Study Results

	Unstandardized Coefficients		Standardized Coefficients		
Predictors	B	Std. Error	Beta	t	Sig.
Age	.022	.066	.249	.341	.733
Gender	.180	.315	.240	.572	.568
Ethnicity	.252	.405	.238	.622	.535
Race	-.264	.228	-.321	-1.157	.249
College Major	-.285	.430	-.256	-.663	.508
College Level	-.070	.128	-.186	-.543	.588

Age did not predict forgiveness, $\beta = -.54$, $p = .65$. After accounting for age, empathy did not predict forgiveness, $\beta = -.01$, $p = .99$. After accounting for age and empathy, the interaction between the two variables did not predict forgiveness, $\beta = .02$, $p = .73$. Age did not moderate the relationship between empathy, as measured with the IRI, and forgiveness, as measured by the FS, among undergraduate college students.

Gender did not predict forgiveness, $\beta = -.12$, $p = .98$. After accounting for gender, empathy did not predict forgiveness, $\beta = -.11$, $p = .82$. After accounting for gender and empathy, the interaction between the two variables did not predict forgiveness, $\beta = .18$, $p = .57$. Gender did not moderate the relationship between empathy, as measured with the IRI, and forgiveness, as measured by the FS, among undergraduate college students.

Ethnicity did not predict forgiveness, $\beta = 2.17$, $p = .78$. After accounting for ethnicity, empathy did not predict forgiveness, $\beta = -.11$, $p = .83$. After accounting for ethnicity and empathy, the interaction between the two variables did not predict forgiveness, $\beta = .25$, $p = .54$. Ethnicity did not moderate the relationship between empathy, as measured with the IRI, and forgiveness, as measured by the FS, among undergraduate college students.

Race did predict forgiveness, $\beta = 8.02$, $p = .05$. After accounting for race, empathy did predict forgiveness, $\beta = .76$, $p = .03$. While the main effects for race and empathy were

significant in predicting forgiveness, the interaction between the two variables did not predict forgiveness, β = -.26, *p* = .25. Therefore, race did not moderate the relationship between empathy, as measured with the IRI, and forgiveness, as measured by the FS, among undergraduate college students.

Undergraduate major did not predict forgiveness, β = 5.35, *p* = .50. After accounting for undergraduate major, empathy did not predict forgiveness, β = .78, *p* = .13. After accounting for undergraduate major and empathy, the interaction between the two variables did not predict forgiveness, β = -.29, *p* = .51. Undergraduate major did not moderate the relationship between empathy, as measured with the IRI, and forgiveness, as measured by the FS, among undergraduate college students.

Undergraduate level did not predict forgiveness, β = .67, *p* = .77. After accounting for undergraduate level, empathy did not predict forgiveness, β = .63, *p* = .09. After accounting for undergraduate level and empathy, the interaction between the two variables did not predict forgiveness, β = -.07, *p* = .59. Undergraduate level did not moderate the relationship between empathy, as measured with the IRI, and forgiveness, as measured by the FS, among undergraduate college students.

Evaluation of Findings

This study showed that the relationship between empathy, as measured with the IRI, and forgiveness, as measured with the FS, when mortality salience was triggered among undergraduate college students was statistically significant. The results provided consistent findings with the HMPTM research that states "the development of prosocial values (such as empathy) within a culture could facilitate socially constructive goals (such as forgiveness), specifically related towards intergroup relations" (McDowell-Smith, 2013). HMPTM provides support for the statement that "if individuals are empathic, then these individuals should be more kind and forgiving toward those identified with transgressors (Rothschild et al., 2009)—as in the case of Muslim Americans who share a religious affiliation with Muslim American terrorists (Gillum & Wilson, 2012)" (McDowell-Smith, 2013). The results also provided support that both male and female participants displayed increased levels of forgiveness between the pre-forgiveness test and the post-forgiveness test. This finding is inconsistent with a study conducted by Konrath et al. (2011), which stated that empathy was diminishing among college students. Yet prior literature has concluded that basic human similarities can be shared among diverse cultures and that the individuals within these diverse cultures can relate to each other; thus reducing levels of prejudice and hostility (Motyl et al., 2011).

An additional explanation for the findings of this study is that the IRI and the FS have been psychometrically validated (Davis, 1980, 1983; Konrath et al., 2011; Rye et al., 2001). Prior studies have also shown that the triggers of mortality salience are accurate reflections of the thoughts and perceptions of individuals (Jonas et al., 2008; Schimel et al., 2006). It is worthy to note that the findings have contributed and extended the research associated with HMPTM. The findings have specifically addressed the relationship between feelings of empathy and forgiveness toward transgressors or outgroups, among college students. Yet is also important to understand that the additional factors of age, gender, ethnicity, race, college major, and college level did not have a direct or moderating effect on the relationship between empathy and forgiveness towards outgroups.

Summary & Implications of Findings

The purpose of this study was to determine if college students displayed a relationship between empathy and forgiveness among Muslim Americans after they examined a media report that discussed homegrown terrorists. A convenience sample of 171 undergraduate, non-Muslim American students, from a 4-year state university in Worcester, Massachusetts completed surveys involving questions about empathy, mortality salience, and forgiveness. The study determined that there was a significant relationship between empathy and forgiveness with, $r(171) = .225$, $p = .003$. Further, the *Factor* x Empathy interaction was evaluated in multiple various linear regression models. In order to investigate whether this relationship was moderated by any factors (i.e., age, gender, ethnicity, race, major, and undergraduate level), the *Factor* x Empathy interaction was evaluated in various multiple linear regression models. Statistical analysis showed that none of the specified factors contributed to the empathy and forgiveness relationship.

The study showed that as the level of empathy increased in undergraduate college students, the level of forgiveness towards Muslim Americans also increased. Further, it was shown that the level of forgiveness increased among the college students between the forgiveness pre-test and the forgiveness post-test.

The events surrounding the 2013 Boston Marathon terrorist attack were utilized in this study to investigate the positive relationship of ingroup members' empathy and mortality salience to forgiveness towards outgroup members. Besides the theoretical contributions to TMT and HMPTM, the study's results lend additional support to the possibility that higher levels of empathy have the ability to reduce negative stereotypes and mortality salience among ingroup towards outgroup members, specifically non-Muslim Americans and Muslim Americans respectively. The findings support Schimel et al.'s (2006) study, which found that individuals with the prosocial value of high trait empathy (Davis, 1980, 1983) had higher levels of forgiveness when they experienced mortality salience. Evidence also supports conceptualizing empathy as a prosocial value, particularly regarding its relationship to intergroup forgiveness—a notion about which previous research had been conflicting (Cikara et al., 2011; Schimel et al., 2006). The forgiveness results refute a prior study (Konrath et al., 2011) that states empathy is decreasing among college students.

The potential limitation of the utilization of the August 2013 Issue of *Rolling Stone*, "Jahar's World" to trigger mortality salience was not relevant to the overall results of the study. After analyzing the screening question of the study, it was determined that only 22 of 171 participants (12.9%) had previously read any articles associated with the Boston Marathon bombings in *Rolling Stone*. Thus, the majority of the participants had not previously read the article selected for the study and any preexisting objection or bias they may have had to the publication of "Jahar's World" in *Rolling Stone* was not of significant importance to the overall results of the study.

The IRI, a multidimensional self-report inventory, may have affected the results of this study. Numerous inventories exist that can assess trait empathy (Davis, 1980, 1983) within individuals; however, the IRI has been validated as a useful tool for many researchers over the past several decades and continues to be used within empathy research (Davis, 1980, 1983; Konrath et al., 2011). However, the results of this study evaluated empathy only through the IRI subscale of empathic concern and did not take into account the other three subscales (since the

subscales are not positively correlated). Thus, the results of the study may have been affected by the decision not only to use this instrument, but to only use one of its subscales.

As previously mentioned in the limitations of the study, since the study participants were obtained from a specific geographical location—one college within the state of Massachusetts—and mostly criminal justice majors, the results of the study are not generalizable to the greater public. The limited sample may have produced biased results as to whether the analyzed factors had moderating effects on the relationship between empathy and forgiveness. The investigation of these factors as moderators of the relationship between empathy and forgiveness was a new area of inquiry presented in this study. Further research is needed before the implications of these factors can be better understood and interpreted in relation to empathy and forgiveness.

While the study is not generalizable to the greater public, there are some potential policy implications that can be drawn. It has been shown that college students do display empathic concern and that the presence of mortality salience can actually increase forgiveness among college students. Even though this was a small sample, it lends support that college universities may be the first step in assisting intergroup conflict among the general public and Muslim Americans. Increased levels of empathy can aid in solving the problem of hostilities towards Muslim Americans and ideally college universities could serve as role models to the rest of the general public as to how to improve the actions of our current society.

Conclusion

The results of this study break new ground for investigating the relationship between empathy and forgiveness when mortality salience is triggered by terrorist activity; yet ample room is left for further exploration of prosocial values within intergroup conflict. It was indicated that empathy had a positive, statistically significant relationship to forgiveness when mortality salience was controlled; however, no factors were found to be significant in moderating this relationship. While these results are consistent with prior literature and research, there is still a great deal that is unknown about the positive trajectory of TMT, also known as HMPTM. The prosocial values that are capable of mitigating negative effects of mortality salience have to be further developed and understood as it is of upmost importance for our society. Since the U.S. has faced the problem of violence related to Muslim terrorist activity (Motyl et al., 2011; Niesta et al., 2008; Rothschild et al., 2009), it continues to be relevant to examine the precise role of other prosocial values in intergroup conflict, as they may continue to promote intergroup forgiveness and ingroup, outgroup post-conflict reconciliation (Schimel et al., 2006; Vail et al., 2012).

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