

DEATH CONCERNS AND POLICE USE OF FORCE

by

Hope Bentley

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Supervising Professor: Cathy Cox, Ph.D.

Department of Psychology

Kendra Bowen, Ph.D.

Department of Criminal Justice

Jacinto Ramos, M.S.

Department of Comparative Race and Ethnic Studies

Abstract

Individuals, including municipal court judges, experience greater defense of their cultural beliefs when thoughts of mortality are salient. With respect to law enforcement, police may engage in more aggressive and authoritative actions in response to heightened death awareness given their subcultural beliefs of being adept at, and being comfortable with, the use of weapons and force. To the extent that reminders of mortality are associated with a greater negativity toward those who threaten cultural expectancies, it was hypothesized that police officers who experience a heightened fear of death (FOD) would endorse the use of unnecessary force in arrests. Three-hundred and one active duty police officers completed an online survey to assess their concerns about mortality and their attitudes toward use of force through a questionnaire and arrest scenarios. The results revealed no relationship between FOD and officer decision-making when use of force was presented as a reasonable course of action (i.e., a physically aggressive suspect). However, when use of force was an unreasonable course of action (e.g., a suspect fleeing the scene), officers endorsed more aggressive policing to the extent that death concerns were high.

Death Concerns and Police Use of Force

In 2014, a police officer shot and killed Michael Brown (Buchanan et al., 2014). After a physical altercation between the two, Brown reportedly ran away from the officer, and when he turned around, was shot at ten times and killed. Brown was unarmed. Since Brown's death, the public has demanded more accountability from officers using force. But this story is just one of many that recently has caught the public's attention. Police officers in the United States are tasked with the important and difficult job of keeping communities safe and, in order to do so, they are allowed abilities that other citizens are not, including use force. However, excessive use of force leads to the deaths of many unarmed victims such as Michael Brown, an 18-year-old, unarmed African American man who was shot and killed by police in Ferguson, MO (The New York Times, 2015). In 2017, 56% of killings by police were the result of a call for a non-violent offense, or no reported crime, which means that more than half of these interactions began as non-violent situations (Mapping Police Violence, 2019). In 13% of the interactions, the victim was unarmed. These facts have caused huge rifts in the relationships between police officers and communities, who are not sure that officers will keep them safe. This is especially true for communities of color, because of the large racial disparity in police use of force. The purpose of the current study was to explore the associative link between death concerns and the extent to which police are willing to use excessive force in arrest situations. Previous terror management theory (TMT) research has found that people are more likely to adhere to their belief systems when thoughts of mortality are salient (Greenberg, Pyszczynski, & Solomon, 1986). In this case, police officers should endorse the use of greater force in arrest scenarios as a way to reduce the threat of death and validate their subcultural beliefs.

Terror Management Theory (TMT)

Terror management theory was inspired by the work of Ernest Becker (1973), who wrote about humans' motivation and need for self-esteem. He noted a similarity in humans and animals, the desire to live, but distinguished animals from humans by their intellectual abilities of thought, symbolic identity, and self-consciousness that allow for an awareness of the inevitability of death. This mortality awareness is terrible and overwhelming, and would impact a human's ability to survive successfully. To protect from this, people create a sense of meaning and value in their lives. Building on this work, TMT (Greenberg et al., 1986) suggests that in order to manage this potential for anxiety, humans have developed cultural worldviews and self-esteem. A cultural worldview is a shared view of the universe, a source of meaning and value (i.e., the beliefs that we adhere to; e.g. religious, nationalism). One's self-esteem comes from whether or not we live up to the expectations of our culture (e.g., standards of attractiveness, doing what is right and avoiding what is wrong).

Cultural worldviews and self-esteem act as protection from anxiety by giving people a belief in literal or symbolic immortality (Maxfield et al., 2014). Literal immortality is the sense that one will live on after physical death (Dechesne et al., 2003). This usually comes from a religion, with a form of afterlife (e.g., reincarnation, heaven). Symbolic immortality is the sense that one is a valuable part of something more significant than one's own existence. This can come from making contributions to one's culture that will last longer than one's life through being honored and remembered, such as being a loving parent, a good American, or brilliant in one's field. Symbolic immortality can include tangible things (e.g. books, pictures) or the intangible (e.g. memories, ideas; Pyszczynski, Solomon, & Greenberg, 2015). In order to attain literal or symbolic mortality, people must maintain faith in their cultural worldviews and live up

to the standards they prescribe. A TMT perspective is a relevant framework to studying police because this idea, that fear of death (FOD) is something that unconsciously impacts people's behaviors all the time, has never been considered in relation to police officers. Three hypotheses that come from TMT, anxiety buffer, death thought accessibility and mortality salience, offer more support for how this can have such a big impact on police officer's use of force.

Anxiety buffer hypothesis. Because of the anxiety that TMT proposes that death awareness creates, there has been research that focuses on how cultural worldviews and self-esteem relate to the potential for anxiety. The anxiety buffer hypothesis of terror management (Greenberg, Solomon, Pyszczynski, Rosenblatt & Al, 1992) states that elevated self-esteem should lessen anxiety related to thoughts of death, meaning that self-esteem works as a buffer to reduce mortality awareness. Prior work by Greenberg and colleagues (1992) first showed this effect. Participants were randomly assigned to receive feedback that was either positive or neutral, in order to increase their self-esteem or leave it unchanged. Individuals then viewed either a video of depictions of death or a neutral one. In comparison to receiving neutral feedback, those who had a self-esteem boost (i.e., positive feedback) indicated less anxiety on a self-report after watching graphic, death-related video footage. In another study, researchers replicated this finding physiologically (i.e., skin conductance - a proxy for anxiety). Those with high self-esteem had less anxiety, even physiologically. These studies, and many since then (Pyszczynski, Solomon, & Greenberg, 2015) provide converging support for the hypothesis that self-esteem works as a buffer against anxiety related to thoughts of death.

Mortality salience hypothesis. Most research within the terror management tradition has explored the mortality salience (MS) hypothesis. This states that if a psychological structure protects against FOD, then reminders of that fear will increase the need for that structure

(Dechesne et al., 2003). It follows that if cultural worldviews and self-esteem provide protection against death-related concerns, then activating thoughts of mortality awareness should increase the need for protection provided by people's cultural worldviews and self-esteem. Mortality salience is thus predicted to lead to increased positive reactions to those who strengthen one's psychological defenses and more negative response to those who threaten them (Cox, Darrell & Arrowood, 2018).

In the typical study on MS, participants will complete a questionnaire that mostly assesses their personality (Burke, Martens & Faucher, 2010). Embedded within this questionnaire, individuals are asked to write about their own death (or in the control, a topic unrelated to death). Through many studies, it has been shown that MS leads to an increase in psychological defenses of cultural worldview and self-esteem (Burke, Martens & Faucher, 2010). For instance, reminders of death have been found to increase worldview defense, including increasing conformity, more positive assessment of in-group members, more nationalistic thoughts, and more positive evaluations of pro-American authors (Arndt, Greenberg & Cook, 2002; Greenberg, Pyszczynski, Solomon, & Rosenblatt, 1990; Renkema, Stapel, Maringer, & van Yperen, 2008). It has also been shown to increase protection of self-esteem, including attitudes toward the self, intentions to improve one's body image through exercise, expected financial success, and self-perception (Arndt, Schimel & Goldberg, 2003; Cox, Arndt, Pyszczynski, Greenberg, Abdollahi, & Solomon, 2008; Dechesne et al., 2003; Kasser & Sheldon, 2000). The aforementioned results are specific to thoughts of death as other negative event such as experiencing pain, uncertainty, fear of public speaking, loss of a loved one, and feelings of meaninglessness to not produce effects similar to a MS manipulation.

Death-thought accessibility (DTA). Of relevance to the current work, the DTA hypothesis of TMT is interested in how heightened mortality awareness can impact people's attitudes and behaviors. Specifically, threats to a person's anxiety buffer (i.e., cultural worldview, self-esteem) should increase the accessibility of death-related thoughts according to this hypothesis. This has been shown in an experimental setting by having participants complete word stems, such as GR___ and DE__ (Greenberg et al., 1994). If a participant has high DTA, there is an increase in the number of word stems they complete in death-related ways (GRAVE, DEAD) as opposed to neutral words (GREAT, DECK). Threats to one's cultural worldview or self-esteem increases death concerns, which in turn increases one's desire to protect that same anxiety buffer (Greenberg et al., 1994).

This hypothesis provides support that one's cultural worldview and self-esteem are important to a person's psychological protection. When those are threatened, mortality related concerns increase, which will make someone want to protect their worldview and self-esteem again. This research shows that police officers may be caught in a cycle caused by awareness of death in their jobs. Because of the nature of being a police officer, death concerns should be particularly salient. This, in turn, may lead them to be more prone to defending their beliefs (i.e., an excessive use of force in arrest settings) in an attempt to reduce the potential for anxiety resulting from the awareness of their mortality.

Worldview defense. When reminders of death are salient, either through the priming of mortality-related thoughts or when assessing for individual differences in DTA, this can lead to an increased positive bias towards one's in-group and greater negativity toward those who are different. For instance, after being primed with MS, participants of a Christian religious background reevaluated a Christian as more positive, compared to those who were not primed

with MS (Greenberg et al., 1990). A subsequent study by Greenberg and colleagues provided similar evidence, when Americans were asked to evaluate someone who praised or criticized American culture. They rated the person who agreed with them more positively, providing support that MS increases in-group bias.

Mortality salience has also been shown to motivate an individual a step further than mere rejection of another who has a different worldview, to use aggression (McGregor et al., 1998). In this study, participants were asked to write about their own death (MS prime), then were presented with a target who either disparaged their political views or did not. When asked how much hot sauce to give this “other” who did not like hot sauce, after MS, participants gave significantly more hot sauce to someone who had disparaged their worldview. This study showed that reminders of death can motivate aggression towards another with a different worldview.

Although the results of hundreds of studies provide support for a TMT perspective in social psychology, no prior work has applied the theory to law enforcement officers or police use of force directly. This is an important limitation as previous research has shown that the way in which individuals defend against mortality awareness can have implications for legal decision-making. For instance, in one of the first tests of the theory, municipal court judges were asked to set a bond amount for a female arrested for prostitution following thoughts of death versus a control topic (Rosenblatt, Greenberg, Solomon, Pyszczynski, & Lyon, 1989). Prior to setting the bond, judges were told that the defendant had a prostitution conviction 6 months prior but no failures to appear in court. The results revealed that judges who were reminded of their death set significantly higher bond amounts than those in the control condition (\$455 vs. \$50, respectively). These findings were expected given that a morally corrupt person should be particularly threatening to judges who are supposed to uphold the laws of society. Additional

research clarified this response by demonstrating that worldview violating others (i.e., prostitutes) are punished more harshly by those who view prostitution as being wrong (Rosenblatt et al., Study 2). According to TMT, worldview defense can also be positive in that persons who uphold cultural values (e.g., stopping a criminal) are given a significantly higher reward following a mortality salience manipulation than a control (\$3,476 vs. \$1,112, respectively; Rosenblatt et al., Study 3).

The extent to which death concerns are salient can also influence the decision-making of jurors. Pickel and Brown (2002), for example, presented individuals with testimony about a defendant charged with driving under the influence of alcohol and resisting arrest. In the mortality salience condition, the prosecutor argued that the accident victims could have been killed, and asked participants to imagine themselves dying in a similar manner. Control participants were told that a car was hit on the way home from the dentist, with one of the victims experiencing dental pain from having his wisdom teeth pulled. The researchers found that death participants were more likely to convict the defendant (on a charge for which the trial information was very ambiguous) and to recommend a longer prison sentence (on a charge for which the trial information indicated guilt). Similar MS effects have been found among jurors for suspects who have committed armed robbery, assault, attempted murder, burglary, forgery, fraud, hate crimes, and malpractice (Arndt, Lieberman, Cook, & Solomon, 2005; Lieberman, Shoemaker, & Krauss, 2014; Florian & Mikulincer, 1997).

The Present Study

Use of force is defined by the Bureau of Justice Statistics (2019) as “the amount of effort required by law enforcement to gain compliance from an unwilling subject” (Terms & Definition section, def. 5). For example, an officer holding a suspect’s arms down while they are struggling

against the officer. That is differentiated from use of excessive force, which is using force beyond what is reasonably believed to be necessary to get a subject to comply. This would be using a weapon against a non-violent suspect who is running away from the officer. There is no national agreement on what exactly constitutes force past that broad definition, but most police departments use a continuum to instruct officers to respond with an appropriate level of force (Police Use of Force, 2016). Most continuums describe elevations in use of force similar to the National Institute of Justice (2009): first, Officer Presence, no force is used; next Verbalization, force is verbalized commands, not physical; Empty-hand control, bodily force is used to gain control of the situation, which can include, grabs, holds, punches or kicks; Less-Lethal Methods, utilizing technologies to gain control of the situation including a baton, chemical spray, or taser; finally, Lethal Force, when deadly weapons are used to gain control of the situation. Officers are instructed to use force as a last resort in order to protect the community and regain control of a situation (Police Use of Force, 2016). However, only four states (i.e., DE, IA, RI, TN) require police by law to attempt another type of force when reasonable before using lethal force (Police Violence Report, 2017).

The current research examined the extent to which mortality concerns are associated with the endorsement of unnecessary force in policing. To do this, a national sample of patrol officers were recruited to answer questions about their mortality (i.e., Revised Collet-Lester Fear of Death Scale; Lester, 1990), along with their attitudes toward use of force (i.e., a questionnaire, Barkan & Cohn, 1988; arrest scenarios, Apaza, 2017; Holmes, 1997). As argued elsewhere (e.g., Phillips & Sobol, 2011; Phillips & Varano, 2008), there are several advantages to utilizing surveys in police research. The use of actual officer reports, for example, has been shown to have poor reliability and validity (Phillips & Varano). Research has demonstrated that scenarios

provide a good representation of real-world settings (Phillips & Varano), in addition to removing issues of social desirability as police are willing to admit to unacceptable behavior (Eterno, 2003). Additionally, given that participants can be presented with several police scenarios at once, with each vignette serving as a unique observation, this has the potential to increase power and statistical significance (Phillips & Varano). To the extent that mortality awareness is associated with greater derogation and aggressiveness (Pyszczynski et al., 2015), it was hypothesized that officers scoring high on FOD, as compared to those with lower mortality awareness, would report a greater acceptance of use of unnecessary force in arrest settings.

Method

Participants

Three-hundred and fifteen active duty police officers participated in this study. The sample included 237 male officers and 78 female officers ($M_{\text{age}} = 45.87$; $SD_{\text{age}} = 10.21$). They were recruited from across the country through Qualtrics, to have a nationally representative group. Everyone was compensated \$28 in exchange for their participation.

Materials

In order to get an honest response from police officers across the country, this study was conducted with a survey over the internet. Participants completed the survey that included a battery of questionnaires through Qualtrics on the computer. The beginning of the survey instructed them that this research was interested in the attitudes and personalities of police officers and that the purpose of the research was to understand police officers' reactions to different scenarios. Participants were told that their responses would be anonymous and that they should respond with their first, gut-level response. The questionnaires are described below and were presented in the following order.

Fear of death (FOD). Participants completed a Fear of Death Scale (Collett-Lester, 1990). Individuals were asked how disturbed or anxious they are made by their own death (e.g. “How it will feel to be dead”). They rated eight statements on their fear their own death. The responses were scored on a 7-point scale (1 = *strongly disagree*; 7 = *strongly agree*). This measure had high scale reliability in the current study ($\alpha = .92$).

Use of force questionnaire. Participants responded to one question (i.e., “Are there any situations you can imagine in which you would approve of a police officer striking an adult male citizen?”) followed by four items assessing approval of police use of force in a specific situation, as in Barkan and Cohn (1998). Two questions evaluated *reasonable* use of force (i.e., “Would you approve of a police officer striking a citizen who was attempting to escape from custody?;” “Would you approve of a police officer striking a citizen who was attacking the officer with his fists?”) and two questions evaluated *excessive* use of force (i.e., “Would you approve of a police officer striking a citizen who had said vulgar and obscene things to the officer?;” “Would you approve of a police officer striking a citizen who was being questioned as a suspect in a murder case?”). Officers responded “yes” or “no” for all items. Scores for “excessive force” items and “reasonable force” items were scored separately, following Silver and Pickett (2015). Participant were scored into one of two groups: (1) responding “yes” to one or both excessive force items or (0) responding no to both excessive force items. Together, the scores of these five questions provided three binary outcome measures (i.e. logistic regression) of support for police use of force (i.e. reasonable force support, excessive force support, & global support).

Use of force vignettes. Attitudes toward police use of force were also measured using two vignettes describing encounters with a suspect, based on Apaza (2017) and Holmes (1997). In one vignette, it would be reasonable to use physical force against the suspect (i.e. the person

striking out an officer). In the other vignette, using physical force would be considered excessive (i.e., traffic violation; see Appendix). Participants were asked to read each vignette and respond to three multiple-choice questions how they would react in the situation: (a) the number of warnings given to the suspect, (b) the amount of force the officer would apply, and (c) the maximum level of force deemed appropriate to make the arrest. The two items about amount of force were scored on an 8-point scale that ranged from lowest force possible (1= *voice controls/commands*) to greatest force possible (8 = *shoots firearm*). Responses to the items were analyzed as separate outcome variables. The order in which the vignettes were presented, either “reasonable force” or “excessive force” first, and Barkan and Cohn’s (1998) use of force scale were counter-balanced.

Demographics for covariates. Different demographics of each participant were also collected in order to check for covariates (Silver & Pickett, 2015). Age, race, relationship status, political beliefs, religion, income, education level, policing experience, and rank were collected. These variables were examined to determine whether they had an effect on a participant’s use of force, or feelings towards use of force.

Results

General Approval of Use of Force

In order to analyze the relationship between death-related thoughts and approval of use of force, a hierarchical logistic regression was conducted. In each model, FOD scores were entered in Block 1, while Block 2 included the different covariates (i.e., sex, age, relationship status, race, education, income; see e.g., Silver & Pickett, 2015 for similar procedures). The results can be found in Table 1. The results showed that greater death concerns predicted an increased odds of endorsing the use of excessive force by 1.37. This overall model had sufficient fit, $\chi^2(1) =$

4.16, $p = .04$, but the covariate model was not a good fit, $\chi^2(6) = 4.07$, $p = .67$. Thus, covariates do not seem to impact the relationship between mortality-related concerns and use of excessive force. Additional logistic regressions were run on the relationship of death thoughts to general force and use of reasonable force. Increased mortality awareness was associated with decreased approval of use of force in general by .67. The overall model was also significant, $\chi^2(1) = 4.04$, $p = .04$, but the covariate model was not a good fit, $\chi^2(6) = 12.10$, $p = .06$. Increased death-related concerns were also associated with decreased odds of endorsing reasonable force. This model was a good fit, $\chi^2(6) = 20.23$, $p = .003$, even when controlling for covariates. The covariates did not change the relationship between death thoughts and use of force. All results remained consistent after controlling for covariates in Step 2.

Reasonable Use of Force Vignette

The relationship between fear of mortality and the reasonable force vignette was examined using a hierarchical linear regression. Three models were tested with death-related thoughts as a predictor: (a) number of warnings, (b) amount of force applied and (c) maximum force. As done previously, FOD was entered as a predictor in Step 1, and sex, age, relationship status, race, education and income were added in Step 2. The results can be found in Table 2. No relationship was found between death-related thoughts and number of warnings, force applied, and maximum force for either Step 1 or Step 2 with covariates.

Excessive Use of Force Vignette

The relationship between mortality concerns and excessive use of force vignette was also analyzed using a hierarchical linear regression in the same way as the previous vignette. Three models were tested: (a) number of warnings, (b) force applied, and (c) maximum force. Fear of death scores were entered in Step 1, and the other covariates were added in Step 2. The results

can be found in Table 3. There was a positive relationship between death-related thoughts and excessive use of force. These results showed that mortality awareness significantly predicted increased use of force. There was no relationship between death concerns and number of warnings or maximum force. After controlling for covariates, there was a positive relationship between FOD and use of excessive force, meaning that increased mortality awareness was related to increased excessive use of force in that model.

Overall, a similar pattern of results emerged for both dependent variables (i.e., policing items & vignettes). When use of force was a reasonable course of action (i.e., being physically attacked), there was no relationship between heightened mortality concerns and police officer decision-making. When use of force was an unreasonable course of action (i.e., a suspect fleeing from a scene), however, officers endorsed more aggressive policing behaviors to the extent that death concerns were high.

Discussion

On April 16th, 2019, lawmakers in Pennsylvania called for a change in the law for when officers use force, including having special prosecutors investigate police shootings. This comes in the wake of the death of Antwon Rose, a teenage boy who was killed by police in 2018 (Wang & Horton, 2018). During a traffic stop, Rose and another person ran away from police when ordered to get out of the car. The officer shot Rose three times from the back. After his death, there were protests throughout Pittsburgh, as well as after the officer was not charged with his murder. Now, legislators are trying to change the laws to respond to a public who is distressed about their relationship with police. But there has not been an improvement in this issue nationally thus far, and this problem will not be solved with only reactionary solutions. It is important to look at what is impacting police officer's behavior when they use force.

The purpose of the present research was to examine the connection between mortality-related concerns and police officer use of force. The current study revealed two important findings regarding use of excessive force. The first is that higher death-related thoughts predict an increased odds of endorsing excessive use of force. The second is that higher mortality awareness is related to use of excessive force, evidenced by a vignette. This specific relationship was made clearer by another finding that showed that higher death-related concerns are related to decreased use of general force and reasonable force.

The natural mortality salience primes that police officers experience daily as a part of their job made TMT (Greenberg, Pyszczynski & Solomon, 1986) a great framework to utilize. The results of the current study showed that increased mortality-related thoughts are related to excessive use of force. This is supported by previous research done on the MS hypothesis, which states that reminders of death will increase the need for a particular protection against death-related anxiety (Burke et al, 2010). Previous research found that people will often engage in worldview defense to reduce their anxiety related to thoughts of death (Dechesne et al., 2003). Other TMT research tied death thoughts to negative treatment to an outgroup member (Castano, 2004), and further research connected MS to increased hostility and aggression (McGregor et al, 1998). McGregor and colleagues (1998) found that individuals increase their aggression towards people who disagree with their worldview (in the experiment, using hot sauce) which is a form of worldview defense. The current results suggest that officers who have high DTA are more approving and willing to use excessive force, though not necessarily reasonable force.

Because of the additional findings that mortality awareness led to decreased general force and reasonable force the specific response of excessive force can be seen similarly to worldview defense. This is because excessive force is not a logical reaction to a threatening problem, like

reasonable force is. After MS, an extremely aggressive response such as excessive use of force is indicative of a reaction of worldview defense, similar to the hot sauce allocation of McGregor's study (McGregor et al, 1998). Excessive force could be going further than what is logically needed to protect yourself from death, similarly to worldview defense, which is not a logical protection from death. Excessive force is aggression against another that is intended to prove one's own worldview right. It is an officer protecting their worldview, their position of authority as a police officer, from a suspect who has a different worldview than their own.

In the current study, officers were only asked about their general thoughts of mortality to assess their natural DTA, they were not primed with mortality salience artificially. Death is something that is a part of their lives as their job, so it is probably not something that they always think about consciously. The additional finding that death-related concerns decrease approval of reasonable force and general force is useful for further solidifying the specificity of the relationship between mortality awareness and excessive force. Reasonable force is a rational response to a threatening situation a police officer would be in and is different from excessive use of force. The most disturbing result is that some officers would utilize lethal force right away on a nonthreatening suspect. As evidenced by high-profile cases, it does happen, but these results show that 3% of officers in the study did utilize lethal force immediately, though this was not tested for significance or reliability. These results show that DTA could be playing a key role in why some officers are killing unarmed civilians. This study calls for additional research, because it made a connection between police officers' natural mortality salience prime and the behavior of officers who think about death more often.

If research continues to establish a connection between mortality concerns and use of force, this could provide important information on how police training could improve. Currently,

police training requirements include 7x's more hours training with a firearm than with de-escalation techniques, so it is no wonder that officers use de-escalation less, perhaps because they feel less confident in their abilities to do so (Mapping Police Violence, 2019). Police officer training could be reworked to include techniques to help officers protect themselves from mortality salience in a healthier way so that they don't feel constant anxiety from thoughts of death. In addition, more training on de-escalation techniques could help officers feel more comfortable in their ability to protect themselves without lethal force.

Limitations

Though these are promising findings, this study had some limitations with one being time. Because the study had to be a certain length, only a few vignettes could be included. In future research, different scenarios could be included in the study to get a fuller picture of what police would do in certain situations. Or, officers could be asked to come to a lab to complete a study that was longer to test more situations. This research also has certain limitations because it was a survey done on the computer that is asking about real-life events. These survey results cannot tell us for certain what an officer would do in a life-threatening situation. For future research, a good model could be to survey police officers in certain cities and review the official data of arrests and use of force. That way, survey results can be compared to actual rates and instances of use of force. We also do not know where officers were when they took the questionnaire, which could have had an impact on them while participating in this study. It would be interesting to see the effects that taking this survey in the lab, versus at their work, has on their death thought accessibility.

Additionally, there are great racial discrepancies in how communities view and trust police officers (President's Task Force, 2015). When asked whether police officers in their

community do a good job of enforcing the law, 83% of White people said they agreed with this, while only 63% of Hispanic people and only 52% of Black people also felt that way. More than half of Hispanic and Black respondents said that they do not have confidence in police officers to not use force in their community, while only 24% of white respondents said the same. People who are Black or Latino are more than 50% more likely to have an interaction with police that involves some sort of force. This racial disparity is also seen in deaths caused by police use of excessive force. In 2017, 58% of unarmed people killed by police were people of color (Police Violence Report, 2017). While Black people are 13% of the population in the United States, they made up 35% of unarmed people killed by police that year. The current research was unable to look at racial disparities in response to the vignettes that were given to officers. Given the racial disparities experienced during policing situations, this is an important direction for future study.

Conclusion

Despite these limitations, the results of this study are important for the future of policing and police training. Future research on this topic is important in order to see what is really happening in these relationships and how exactly training can be improved. The current study wanted to examine the interactions of race with use of force as well, but because the study was not diverse and majority of the sample was white males, that could not happen. Though this is reflective of the police force in general, it is necessary to examine whether race is playing a role, because as shown by the research (Mapping Police Violence, 2019) people of color are killed at a much higher rate than white people. Perhaps additional training on high death thoughts and how to manage them could be a solution, in addition to implicit bias training, which many departments have implemented in the wake of high-profile cases. It would also be interesting to look at the differences in trainings in specific police departments. This study looked at officers

nationally, but differences exist between police departments, even locally. For example, the Mansfield Police Department claims to have a comprehensive training program for new officers, which is often compared to the less comprehensive training of Fort Worth Police Department. Looking into whether differences exist between police departments as well as crime rates in specific departments is important in further discerning this issue. It could also be important to look at differences between specific officers. An important distinction could be between police officers who have been in the job for a longer amount of time, and whether they have more death thoughts or less. It would also be interesting to know whether a police officer's rank has an impact on their death thoughts and use of force. An officer's background in the military could also provide insight into their thoughts of death and behavior. Another future direction this research could go in is to prime officers with death before they take the survey. This study used the naturally occurring death thought accessibility from being a police officer, but priming officers with death in the moment could have a different impact on their use of force.

This study marks the beginning of an important inquiry into police officer's use of force. The public is angry about the deaths of unarmed civilians by police officers, and the mistrust of police makes their job of keeping communities safe incredibly hard. Current suggestions, like implicit bias training, have not offered a comprehensive solution to this issue, as we see that the number of deaths is not decreasing (2016= 1,092, 2017=1147, 2018 = 1,166 victims) ("Mapping Police Violence", 2019). It is essential to do more research on this topic so that we can improve relationships between police and communities. This will not only save civilian lives, like future Michael Browns or Antwon Roses, but also improve the well-being and safety of police officers.

References

- 2015 Police Violence Report. (n.d.). Retrieved from <https://mappingpoliceviolence.org/2015>
- 2017 Police Violence Report. (2017). Retrieved from <https://policeviolencereport.org/>
- Apaza, C. E. (2017). Perceptions on police use of force: A general strain theory approach to explicate use of force incidents. Retrieved from *BSU Master's Theses and Projects*. (Item 55). <http://vc.bridgew.edu/theses/55>
- Arndt, J., Lieberman, J. D., Cook, A., & Solomon, S. (2005). Terror management in the courtroom: Exploring the effects of mortality salience on legal decision making. *Psychology, Public Policy, and Law*, 11(3), 407-438. doi:10.1037/1076-8971.11.3.407
- Arndt, J., Greenberg, K., & Cook, a. (2002). Mortality salience and the spreading activation of worldview-relevant constructs: Exploring the cognitive architecture of terror management. *Journal of Experimental Psychology: General*, 131, 307-324.
- Arndt, J., Greenberg, J., Pyszczynski, T., & Solomon, S. (1997). Subliminal Exposure to Death-Related Stimuli Increases Defense of the Cultural Worldview. *Psychological Science*, 8(5), 379-385. doi:10.1111/j.1467-9280.1997.tb00429.x
- Arndt, J., Schimel, J., Goldenberg, J. L. (2003). Death can be good for your health: Fitness intentions as a proximal and distal defense against mortality salience. *Journal of Applied Social Psychology*, 33, 1726-1746.
- Barkan, S. E., & Cohn, S. F. (1998). Racial prejudice and support by whites for police use of force: A research note. *Justice Quarterly*, 15(4), 743-753.
doi:10.1080/07418829800093971
- Becker, E. (1973). *The denial of death*. New York: Free Press.

- Buchanan, L., Fessenden, F., Lai, K. R., Park, H., Parlapiano, A., Tse, A., Yourish, K. (2014, August 13). What Happened in Ferguson? Retrieved from <https://www.nytimes.com/interactive/2014/08/13/us/ferguson-missouri-town-under-siege-after-police-shooting.html>
- Burke, B. L., Martens, A., & Faucher, E. H. (2010). Terror Management Theory: A Meta-Analysis of Mortality Salience Research. *Personality and Social Psychology Review, 14*, 155-195. doi:10.1037/e741342011-089
- Castano, E., Yzerbyt, V., Paladino, M., & Sacchi, S. (2002). I Belong, therefore, I Exist: Ingroup Identification, Ingroup Entitativity, and Ingroup Bias. *Personality and Social Psychology Bulletin, 28*(2), 135-143. doi:10.1177/0146167202282001
- Castano, E. (2004). In case of death, cling to the ingroup. *European Journal of Social Psychology, 34*(4), 375-384. doi:10.1002/ejsp.211
- Cox, C., Darrell, A., & Arrowood, R. (2018). The Method Behind the Science: A Guide to Conducting Terror Management Theory Research. In *Handbook of Terror Management Theory* (pp. 85-132). Clay Routledge, Matthew Vess Academic Press.
- Cox, C., Arndt, J., Pyszczynski, T., Greenberg, J., Abdollahi, A., & Solomon, S. (2008). Terror management and adults' attachment to their parents: The safe haven remains. *Journal of Personality and Social Psychology, 94*, 696-717.
- Dechesne, M., Pyszczynski, T., Arndt, J., Ransom, S., Sheldon, K. M., Knippenberg, A. V., & Janssen, J. (2003). Literal and symbolic immortality: The effect of evidence of literal immortality on self-esteem striving in response to mortality salience. *Journal of Personality and Social Psychology, 84*(4), 722-737. doi:10.1037/0022-3514.84.4.722

- Eterno, J. (2003). *Policing within the law: A case study of the New York City Police Department*. Santa Barbara: ABC-CLIO.
- Florian, V., & Mikulincer, M. (1997). Fear of death and the judgment of social transgressions: A multidimensional test of terror management theory. *Journal of Personality and Social Psychology*, 73(2), 369-380. doi:10.1037/0022-3514.73.2.369
- Following Death Of Antwon Rose, Lawmakers Call For Changes To Police Use Of Deadly Force. (2019, April 16). Retrieved from <https://pittsburgh.cbslocal.com/2019/04/16/legislative-black-caucus-police-shootings/>
- Fryer, R. G. (2018). An Empirical Analysis of Racial Differences in Police Use of Force. *Journal of Political Economy*, 000-000. doi:10.1086/701423
- Greenberg, J., & Kosloff, S. (2008). Terror management theory: Implications for understanding prejudice, stereotyping, intergroup conflict, and political attitudes. *Social and Personality Psychology Compass*, 2(5), 1881-1894. doi:10.1111/j.1751-9004.2008.00144.x
- Greenberg, J., Pyszczynski, T., & Solomon, S. (1986). The causes and consequences of a need for self-esteem: A terror management theory. In R. F. Baumeister (Ed.), *Public self and private self* (pp. 189–212). New York: Springer.
- Greenberg, J., Pyszczynski, T., Solomon, S., Rosenblatt, A., & Al, E. (1990). Evidence for terror management theory II: The effects of mortality salience on reactions to those who threaten or bolster the cultural worldview. *Journal of Personality and Social Psychology*, 58(2), 308-318. doi:10.1037/0022-3514.58.2.308
- Greenberg, J., Pyszczynski, T., Solomon, S., Simon, L., & Al, E. (1994). Role of consciousness and accessibility of death-related thoughts in mortality salience effects. *Journal of Personality and Social Psychology*, 67(4), 627-637. doi:10.1037//0022-3514.67.4.627

Greenberg, J., Solomon, S., Pyszczynski, T., Rosenblatt, A., & Al, E. (1992). Why do people need self-esteem? Converging evidence that self-esteem serves an anxiety-buffering function. *Journal of Personality and Social Psychology*, *63*(6), 913-922.

doi:10.1037//0022-3514.63.6.913

Halloran, M. J., & Kashima, E. S. (2004). Social Identity and Worldview Validation: The Effects of Ingroup Identity Primes and Mortality Salience on Value Endorsement. *Personality and Social Psychology Bulletin*, *30*(7), 915-925. doi:10.1177/0146167204264080

Harmon-Jones, E., Simon, L., Greenberg, J., Pyszczynski, T., Solomon, S., & McGregor, H. (1997). Terror management theory and self-esteem: Evidence that increased self-esteem reduces mortality salience effects. *Journal of Personality and Social Psychology*, *72*, 24-36.

Hayes, J., Schimel, J., Faucher, E. H., & Williams, T. J. (2008). Evidence for the DTA hypothesis II: Threatening self-esteem increases death-thought accessibility. *Journal of Experimental Social Psychology*, *44*(3), 600-613. doi:10.1016/j.jesp.2008.01.004

Holmes, S. T. (1997). *Defining the occupational definition of police excessive force* (Unpublished doctoral dissertation). University of Cincinnati, Cincinnati, OH.

Juhl, J., Routledge, C., & Sedikides, C. (2011). Adjusting to death: The effects of mortality salience and self-esteem on psychological well-being. *PsycEXTRA Dataset*.

doi:10.1037/e527772014-701

Kasser, T., & Sheldon, K. M. (2000). Of wealth and death: Materialism, mortality salience and consumption behavior. *Psychological Science*, *11*, 348-351.

- Lieberman, J., Shoemaker, J., & Krauss, D. (2014). The effects of mortality salience and evidence strength on death penalty sentencing decisions. *Psychology Crime & Law, 20*(3), 199-221. doi:10.1080/1068316X.2013.770853
- Mapping Police Violence. (2019). Retrieved from <https://mappingpoliceviolence.org/>
- Maxfield, M., Greenberg, J., Pyszczynski, T., Weise, D. R., Kosloff, S., Soenke, M., . . . Blatter, J. (2014). Increases in Generative Concern among Older Adults following Reminders of Mortality. *The International Journal of Aging and Human Development, 79*(1), 1-21. doi:10.2190/ag.79.1.a
- McGregor, H. A., Lieberman, J. D., Greenberg, J., Solomon, S., Arndt, J., Simon, L., & Pyszczynski, T. (1998). Terror management and aggression: Evidence that mortality salience motivates aggression against worldview-threatening others. *Journal of Personality and Social Psychology, 74*(3), 590-605. doi:10.1037//0022-3514.74.3.590
- Paoline, E. A., Gau, J. M., & Terrill, W. (2016). Race and the Police use of Force Encounter in the United States. *British Journal of Criminology*. doi:10.1093/bjc/azw089
- Pickel, K. L., & Brown, J. R. (2002). Mortality salience and jurors' evaluations of criminal defendants: The effects of thinking about one's own or another person's death. *Unpublished manuscript*.
- Phillips, S. W., & Sobol, J. J. (2011). Police attitudes about the use of unnecessary force: An ecological examination. *Journal of Police and Criminal Psychology, 26*(1), 47-57. doi:10.1007/s11896-010-9067-6
- Phillips, S. W., & Varano, S. P. (2008). Police criminal charging decisions: An examination of post-arrest decision-making. *Journal of Criminal Justice, 36*(4), 307-315. doi:10.1016/j.jcrimjus.2008.06.002

Police shootings 2017 database. (n.d.). Retrieved from

<https://www.washingtonpost.com/graphics/national/police-shootings-2017/>

Police Use of Force. (2016, November 29). Retrieved from <https://www.nij.gov/topics/law-enforcement/officer-safety/use-of-force/Pages/welcome.aspx>

President's Task Force on 21st Century Policing Recommendations: From Print to Action. (2017, March 03). Retrieved from <https://www.justice.gov/archives/opa/blog/president-s-task-force-21st-century-policing-recommendations-print-action>

Pyszczynski, T., Greenberg, J., & Solomon, S. (1997). Why Do We Need What We Need? A Terror Management Perspective on the Roots of Human Social Motivation. *Psychological Inquiry*, 8(1), 1-20. doi:10.1207/s15327965pli0801_1

Pyszczynski, T., Greenberg, J., & Solomon, S. (1999). A dual-process model of defense against conscious and unconscious death-related thoughts: An extension of terror management theory. *Psychological Review*, 106(4), 835-845. doi:10.1037//0033-295x.106.4.835

Pyszczynski, T., Solomon, S., & Greenberg, J. (2015). Thirty Years of Terror Management Theory. *Advances in Experimental Social Psychology*, 52, 1-70. doi:10.1016/bs.aesp.2015.03.001

Renkema, L. J., Stapel, D. A., Maringer, M., & van Yperen, N.W. (2008). Terror management and stereotyping: Why do people stereotype when mortality is salient? *Personality and Social Psychology Bulletin*, 34, 553-564.

Rosenblatt, A., Greenberg, J., Solomon, S., Pyszczynski, T., & Lyon, D. (1989). Evidence for terror management theory: I. the effects of mortality salience on reactions to those who violate or uphold cultural values. *Journal of Personality and Social Psychology*, 57(4), 681-690. doi:10.1037/0022-3514.57.4.681

- Silver, J. R., & Pickett, J. T. (2015). Toward a better understanding of politicized policing attitudes: Conflicted conservatism and support for police use of force. *Criminology*, 53(4), 650-676. doi:10.1111/1745-9125.12092
- Simon, L., Greenberg, J., Harmon-Jones, E., Solomon, S., Pyszczynski, T., Arndt, J., & Abend, T. (1997). Terror management and cognitive-experiential self-theory: Evidence that terror management occurs in the experiential system. *Journal of Personality and Social Psychology*, 72(5), 1132-1146. doi:10.1037/0022-3514.72.5.1132
- Solomon, S., Greenberg, J., & Pyszczynski, T. (1991). A Terror Management Theory of Social Behavior: The Psychological Functions of Self-Esteem and Cultural Worldviews. *Advances in Experimental Social Psychology Advances in Experimental Social Psychology Volume 24*, 93-159. doi:10.1016/s0065-2601(08)60328-7
- Swaine, J., Laughland, O., & Lartey, J. (2015, June 01). Black Americans killed by police twice as likely to be unarmed as white people. Retrieved from <https://www.theguardian.com/us-news/2015/jun/01/black-americans-killed-by-police-analysis>
- The New York Times. (2015, August 10). *What happened in Ferguson?* Retrieved from <https://www.nytimes.com/interactive/2014/08/13/us/ferguson-missouri-town-under-siege-after-police-shooting.html>
- The Use-of-Force Continuum. (2009, August 4). Retrieved from <https://www.nij.gov/topics/law-enforcement/officer-safety/use-of-force/Pages/continuum.aspx>
- Use of Force. (n.d.). Retrieved from <https://www.bjs.gov/index.cfm?ty=tp&tid=84>
- Wang, A. B., & Horton, A. (2018, June 27). Officer who shot and killed Antwon Rose is charged with criminal homicide. Retrieved from <https://www.washingtonpost.com/news/post->

nation/wp/2018/06/27/east-pittsburgh-police-officer-who-shot-and-killed-antwon-rose-
charged-with-criminal-homicide/?utm_term=.e8c0e582c66d-shot-and-killed-antwon-
rose-charged-with-criminal-homicide/?utm_term=.e8c0e582c66d

Appendix

Reasonable Force Vignette

The following is a description of police patrol activity. Please read the paragraph carefully and then answer the questions that follow.

You are dispatched to a domestic violence incident in a middle-class area, where calls for service are rare. Prior to getting out of the cruiser, you are able to determine who the main suspect is. Four to five persons are assembling around the suspect in front of the doorway of a single-family dwelling. Upon close inspection, you determine that the suspect is a large-sized male believed to be in his mid-twenties. You move within five feet of the suspect and engage in conversation. The appearance of the suspect's clothing is rumpled and messy. In general, the suspect's demeanor toward you is best characterized as abusive and violent. Finding probable cause, you attempt to place the suspect under arrest. The suspect pushes you away each time you step close enough to gain control.

Excessive Force Vignette

The following is a description of police patrol activity. Please read the paragraph carefully and then answer the questions that follow.

You conduct a motor vehicle stop for an equipment violation in a business parking lot. You approach the vehicle and see three people in the vehicle. You informed the driver the reason for the stop. The driver tells you that the car is uninsured and unregistered because he just bought the vehicle. You return to your patrol car to check the driver's license that was given. At this time, the driver exits the vehicle and starts running towards an open area. Immediately, you inform dispatch that you are in a foot pursuit, you give a description of the suspect (male, approximately 6'0 and 250 pounds, blue shirt, and black jeans) and direction of travel. You are able to catch up to the driver and he is within arm's length.

How many warnings would you give the suspect before using physical force to affect this arrest?

0 (zero warnings)

1

2

3

4 (4 or more warnings)

If verbal warnings and gentle touch techniques are not effective, what level of force would you apply next?

Voice Control/Command

Voice Control/Command with Control Hold (e.g., escort, pain-compliance)

Use Oleoresin Capsicum (OC) Spray (e.g., pepper spray, chemical agent)

Use Impact Weapon (e.g., baton, Maglite flashlight, strikes/punches)

Present Conducted Energy Device (CED – Taser)

Shoot CED (Taser)

Present Firearm

Shoot Firearm

What would you consider to be the highest level of appropriate force you would use to affect this arrest?

Voice Control/Command

Voice Control/Command with Control Hold (e.g., escort, pain-compliance)

Use Oleoresin Capsicum (OC) Spray (e.g., pepper spray, chemical agent)

Use Impact Weapon (e.g., baton, Maglite flashlight, strikes/punches)

Present Conducted Energy Device (CED – Taser)

Shoot CED (Taser)

Present Firearm

Shoot Firearm

Table 1. Results of the hierarchical logistic regression analyses on each force subscale.

Variables	<i>Model 1: General Force</i>			<i>Model 2: Reasonable Force</i>			<i>Model 3: Excessive Force</i>		
	<i>b</i>	<i>SE</i>	<i>Odds-ratio</i>	<i>b</i>	<i>SE</i>	<i>Odds-ratio</i>	<i>b</i>	<i>SE</i>	<i>Odds-ratio</i>
Step 1									
Death	-.40	.21	.67*	-.30	.10	.74**	.31	.16	1.37*
Step 2									
Death	-.46	.22	.63*	-.28	.11	.75**	-.28	.11	.75*
Sex	.85	.74	2.33	.21	.39	1.23	.21	.39	1.23
Age	.01	.03	1.01	-.05	.02	.95**	-.05	.02	.95**
Relationship	.12	.74	1.13	-.21	.36	.81	-.21	.36	.81
Race	-18.85	4593.01	<.001	.87	.37	2.39*	.87	.37	2.39*
Education	.45	.26	1.58^	.07	.14	1.07	.07	.14	1.07
Income	-.26	.20	.77	2.44	1.20	11.43*	.33	.11	1.39**

Note: ^ $p \leq .10$

* $p \leq .05$

** $p \leq .01$

Table 2. Results of the hierarchical regression for reasonable force.

Variables	<i>Model 1: Warnings</i>			<i>Model 2: Force</i>			<i>Model 3: Max Force</i>		
	<i>b</i>	<i>SE</i>	<i>R</i> ²	<i>b</i>	<i>SE</i>	<i>R</i> ²	<i>b</i>	<i>SE</i>	<i>R</i> ²
Step 1									
Death	.003	.45	<.001	-.03	.06	.001	-.003	.06	<.001
Step 2									
Death	.002	.04	<.001	-.03	.06	.001	.02	.06	<.001
Sex	-.22	.16	.01	.47*	.23	.01	.45 [^]	.23	.01
Age	.01	.01	.01	-.01	.01	.001	-.01	.01	.001
Relationship	.15	.14	.004	-.03	.20	<.001	.11	.21	.001
Race	-.09	.15	.001	.11	.22	.001	.41 [^]	.23	.01
Education	.05	.06	.001	-.11	.08	.01	.07	.08	.002
Income	-.05	.04	.01	-.07	.06	.01	-.04	.06	.002

Note: [^] $p \leq .10$

* $p \leq .05$

** $p \leq .01$

Table 3. Results of the hierarchical regression for excessive force.

Variables	<i>Model 1: Warnings</i>			<i>Model 2: Force</i>			<i>Model 3: Max Force</i>		
	<i>b</i>	<i>SE</i>	<i>R</i> ²	<i>b</i>	<i>SE</i>	<i>R</i> ²	<i>b</i>	<i>SE</i>	<i>R</i> ²
Step 1									
Death	-.02	.05	.001	.12*	.06	.01	.11	.07	.01
Step 2									
Death	-.01	.05	<.001	.12*	.06	.02	.12 [^]	.07	.01
Sex	.03	.17	<.001	.07	.22	<.001	-.22	.28	.002
Age	.02*	.01	.02	-.01	.01	.001	-.01	.01	.003
Relationship	.10	.15	.002	-.07	.19	.001	.23	.24	.003
Race	.01	.17	<.001	.35	.21	.01	.30	.27	.004
Education	.07	.07	.004	-.05	.08	.001	.01	.10	<.001
Income	-.03	.04	.002	-.05	.06	.003	-.004	.07	<.001

Note: [^] $p \leq .10$

* $p \leq .05$

** $p \leq .01$