Trauma, faith, and coping: The role of meaning

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Abstract

This study examined the effect of positive and negative religious coping on self-forgiveness for people who have experienced psychological trauma. Each participant completed measures of religiosity, trauma exposure, and PTSD. Participants (n = 83) were assigned to either the positive religious coping group, where they wrote an essay for 20 minutes using positive religious coping techniques or to the control group, where they wrote a neutral essay. Then, I assessed self-forgiveness for an everyday offense. I hypothesized that the effect of the treatment group on self-forgiveness would depend on trauma exposure and posttraumatic symptoms. I also predicted that those who experienced more trauma would show less self-forgiveness and less positive religious coping. Results supported the second hypothesis. The treatment group did have a significant yet unexpected interaction with traumatic exposure. These results suggest that trauma has a widespread effect on self-forgiveness and religious coping, even in reference to a minor hurtful offense.

Keywords: PTSD, trauma, self-forgiveness, religious coping, spirituality, forgiveness

Trauma, Faith, and Coping: The Role of Meaning

What does religion signify for those who have been traumatized? For some, it means oppression and violence, anxiety and disappointment; for others, it means peace and wholeness. Religion and trauma have had a notoriously tumultuous relationship. Trauma is any event that is mental or physical which produces intense feelings, frightening thoughts, or fight-or-flight behavior (NIMH, 2009). Trauma is subjective, and what is traumatic varies from person-to-person. It can affect religious beliefs, either weakening or strengthening them (Ano & Vasconcelles, 2005). In some instances such as in the case of child sexual abuse by priests, trauma takes on a religious tone. Religious beliefs themselves have even directly caused victimization of others, usually children. In the face of such atrocities, one wonders, does religion exacerbate the problems and weaknesses of humanity (Bottoms, Nielsen, Murray, & Filipas, 2003)? Yet in other situations, many people find comfort and motivation in religion that they may not have found elsewhere. They are healthier mentally, emotionally, and socially and contribute to the well-being of their societies. It is no accident that both Martin Luther King, Jr. and Mahatma Gandhi claimed to be religious. Depending on the way people use religion to cope with stressful situations, it can have positive or negative effects for people who have been traumatized.

Traumatized by religion

While religion often has positive effects on well-being, it can certainly have negative effects on mental health—from contributing to relatively common problems such as low self-esteem to causing the abuse directly (Doyle, 2009). Officially, abuse isn't conceptualized as a spiritual phenomenon. The NCANDS Report of Child Abuse and Maltreatment (2011) defines

abuse as, “Any recent act or failure to act on the part of a parent or caretaker which results in death, serious physical or emotional harm, sexual abuse or exploitation; or…which presents an imminent risk of serious harm.” I would add to this definition a spiritual dimension where religion is used as a weapon to inflict serious emotional, physical, or sexual harm. When abuse is perpetuated for religious reasons, it has a unique and powerful effect on its victims. In no instance is this clearer than in clergy sexual abuse. The Catholic Church has a high level of authority for believers and inspires unquestioning loyalty in some (Doyle, 2009). As Doyle writes, some parishioners learn that the voice of the clergyperson is the same as the voice of God, and to disobey clergy is to disobey God. The clergy, the pope, and bishops represent a way for ordinary people to communicate with God himself. Because the Church may unquestioningly believe clergy, this hurts victims of sexual abuse when they try to expose the cleric’s abuse. The parents of the abused child may disbelieve the child, punish the child for false accusations, or even stay silent for fear of the Church, making the parents accomplices in the abuse. Even worse, the priest is God’s representative. As an example of this, he forgives sins on God’s behalf in the confession booth. To be sexually violated by him is to be sexually violated by a central moral authority with great power.

In many Roman Catholic parishes, it is an honor to be given special attention by a priest and so parents may encourage overnight trips and other activities, unknowingly enabling the abuse (Benkert & Doyle, 2009). The priest earns the victim’s trust, and so by the time he makes advances, the victim is shocked into silence. The Catholic Church discourages outward sexual expression of any kind, including GLBT sexual expression, and so the person who is supposed to teach these values is the very one calling the victim to dismiss them. For a young child, this can be very confusing. He or she may feel intense guilt, especially if the abuse has caused him or her

to experience sexual pleasure. Catholic tradition teaches that confession to a priest is the only way to atone for sin, but by this time the priest has caused that same sin and so the victim is caught in a conundrum. In this case, deeply-entrenched religious beliefs become weapons of abuse, just as a religious authority figure has become a perpetrator.

Abuse usually is not an isolated event, but it can continue for years because the victim develops a special relationship with the priest called a "trauma bond" (p. 235, Benkert & Doyle, 2009) In a trauma bond, the victim develops a special attachment to the perpetrator that motivates him or her to stay in the cycle of victimization. The victim usually has a pre-existing emotional relationship with the priest before the abuse which contributes to the development of a trauma bond. The longer the abuse continues, the stronger this bond becomes. If the Church is reluctant to act to stop the abuse, this constitutes its approval in the victim's eyes. Often because of the trauma bond, the victim is reluctant to report the abuse. This bond has a religious nature because the relationship begins as a strictly religious one. The abuse takes on religious significance so that the victim's religious beliefs about the priest also contribute to the trauma. At the same time, the abuse causes the victim to reevaluate and question his or her religious beliefs.

Religion can harm the victim in other ways—sometimes, by making the victim less likely to report the abuse. Religion-related abuse is not limited to the Roman Catholic Church, but can happen in other denominations and other religions as well. Some fairly universal Christian principles that can make women more likely to stay in abusive spousal relationships are the concepts of forgiveness and sacrifice (Nason-Clark, 2004). Divorce is seen as a last resort, and is supported only in dire circumstances (Matthew 19). These are heavily taught in Christian circles, and victims of abuse take them to heart in particularly destructive ways. Religious women are

less likely to leave their abuser, identifying with Jesus as the sacrificial lamb and seeing the abuse as their "cross to bear." If religious women believe that their families have failed due to the loss of harmony, they may believe that they have failed God. Because of this, they are especially vulnerable in cases of abuse. Religious women are more likely to believe that the abuser will change, and are quick to forgive him by continuing to be supportive housewives (p. 304). They forget that sometimes the best way to help their spouse is to protect themselves, to put up healthy boundaries that will motivate him to change. To stay is to become an enabler. The concepts of forgiveness and reconciliation can bring deep healing to these women, but only if they are practiced with safe boundaries.

Nason-Clark suggests that two religious factors contribute to abuse prevalence in the Church: Emphasis on family and over-spiritualization of social problems by clergy. To break apart the family, especially through divorce, is to desecrate something sacred, so this makes religious women less likely to leave their abusive spouses. The Church can, however, play an important role in supporting abused women by educating them about abuse. If the Church does this, women are more likely to report abuse, but if the church does not discuss abuse, women are less likely to report it. This is just one example of how the religious beliefs of victims can worsen or improve their abuse situations.

Trauma damaging faith

Traumatic events, because of their intensely personal and invasive nature, tend to have deep effects on victims' spiritual lives. In particular, religious abuse can be extremely spiritually destructive. Cases of child sexual abuse by priests have been especially destructive for religious victims. As described by Doyle (2009):

> *When a priest sexually violates a minor or an adult the shock to the victim's spiritual and emotional system is beyond adequate description….The complex trauma begins with the sexual violation itself and extends to the shock from the deep sense of betrayal not just by a trusted person but by the God personified by that person (p. 251).*

Abuse by a priest brings additional complications that may make the victim less likely to report abuse or to resist further abuse and more likely to experience moral confusion, especially about sexuality (Benkert & Doyle, 2009). Since priests who abuse often select very religious victims, the trauma extends into the most meaningful part of their lives.

Some victims of abuse use religion to condone the abuse, a potentially maladaptive coping method. One group of researchers discovered that 28% of religion-related abuse victims in their study felt the abuse was justified for religious reasons (Bottoms, Nielsen, Murray, & Filipas, 2003). They recruited 54 men and 72 women for the study: One group had experienced childhood abuse related to religion, one had experienced non-religion-related child abuse, and one had not experienced abuse and served as the control. All participants completed measures of abuse experiences, Christian orthodoxy and importance of religion, and many psychological correlates such as depression and self-esteem. Victims of religious abuse reported more depression and other negative psychological symptoms such as anxiety. One has to wonder if justifying something as destructive as abuse would cause a person to have more anxiety, although the study does not clearly demonstrate this. Yet the same study also showed possible positive effects of religion on coping. Interestingly, their results showed that victims of religious and non-religious abuse had similar levels of negative effects of the trauma, but victims of religious abuse were significantly more likely to report positive effects of the abuse than victims of non-religious abuse (χ^2 (1, N = 71) = 6.16, p =.01). This could have several possible

meanings: One meaning might be that the moral pressure exerted during religious abuse and the salience of moral concepts in victims' minds influences them to find more positive effects of the abuse. Or conversely, perhaps the moral salience influenced the victim to discover faith for him/herself and to correct the hurtful religious ideas that impacted themselves after the abuse.

Religious motivations for traumatization

Although religion can be used as a coping mechanism for dealing with trauma, it can also cause believers to perpetrate it. In some instances, religious laypeople can also use religion as motivation for perpetuating abuse (Hughes, 1990; Capps, 1992). They may see abuse as exorcism of evil, punishment of sin, or obedience to God (Bottoms, Shaver, Goodman, & Qin, 1995). Even a committed Christian such as Donald Capps had to admit that religion has dark underpinnings that can be extremely destructive (Capps, 1992). In his article aptly entitled, "Religion and child abuse: Perfect together," he details how an abusing parent may believe that he or she is an agent of God's discipline, and how certain religious ideas taught by parents can torment children and affect their religious development. He gives an example describing an instance where seemingly benign beliefs hurt a child's faith: This child who was told that if he had enough faith, his prayers would be answered. He prayed that his aunt who had cancer would be healed, and when she died, his faith suffered so much that it took a lifetime to recover. Ideas such as these can be very damaging for children because they are well-intentioned yet not always appropriate for them at certain ages. One of Capps's more powerful points surfaces when he quotes from James Dobson, a fundamentalist Christian advocate for corporal punishment. Dr. Dobson recalls being punished by his mother, who would throw any object near her at him if he was "sassy," once even throwing her own undergarment at him. Dobson then became an

advocate of corporal punishment, arguably encouraging potential abuse so that it can be used as a unique expression of Christian love towards the child. Examples such as these provide a warning for all religious parents to think carefully about how they teach their religious beliefs because even well-intentioned lessons when not executed properly can severely damage a child's faith and affect its development.

A more extreme example of religious justification of child abuse lies in the case of Faith Assembly, a faith healing sect in Indiana. Hughes (1990) describes it as a sect that caused preventable deaths because it contended that most illnesses were psychosomatic and hospitals were evil temples of Satan. Faith Assembly averaged about 10 deaths a year. The founder of the sect, Hobart Freeman, taught that medical treatment is the same as unbelief, and that if a person has enough faith, the person will be healed. People who want to pray for healing should tell God he is the only one who has power, command the Devil to leave the body, and believe that healing will occur. Freeman claimed that he was healed from a heart condition by denying his symptoms and confessing God's promises without using medicine or medical treatment. One of Freeman's own daughters had been in a car accident and broke her arm and elbow. She was taken to the hospital without his knowledge and consent, so he drove to the hospital and refused to have her treated although the doctor begged for him to let her stay. Freeman preached these ideas to his congregation, and many unnecessary deaths happened as a result. This case illustrates how religion can be used to justify extreme abuse, and thus contribute to and cause profound trauma.

Some critics of religion contend that something inherent in some mainstream religious tenets lends itself easily to justification of abuse (Bottoms, Shaver, Goodman, & Qin, 1995). Bottoms and colleagues created a national survey of mental health professionals, and

focused their attention on what kinds of religious abuse were perpetuated, along with possible causes that they believed were religion-related. To support their case, they reference a few verses from Proverbs: “He that spareth the rod hateth his son: but he that loveth him chaseneth him betimes…Withhold no correction from the child: For if thou beatest him with the rod, he shall not die. Thou shalt beat him with the rod, and shalt deliver his soul from hell” (Proverbs 13:24; 23:13-14). Bottoms recounts a story of a child who was physically abused at school by her teachers. They beat her until blood ran down her legs, and told her parents “The Devil is in her” (Greven, 1991, p. 192). Another abusive circumstance happened when a group of men gang-raped a 7-year-old girl to rid her of evil. Her psychiatrist answered questions as part of a study by Bottoms et al. Bottoms and colleagues questioned clinicians about cases of religion-related violence such as these. She contends that religion itself is a primary cause, that the religious abuse the perpetrators committed chiefly stemmed from their beliefs, not their severe mental illnesses. Many of the clinicians she interviewed, however, did not share this view. They cited schizophrenia and other mental illnesses as the chief reasons why perpetrators started to abuse. Researchers have not reached a consensus on whether those who espouse conservative religious beliefs are inherently more abusive or violent, however (Nason-Clark, 2004). Religion does provide a significant motivation for abuse, but it is not the only cause, and it may not always be the root cause.

While religion may not inherently cause trauma, certain specific aspects of religion can contribute to abuse. The stereotype is that conservative Protestants are more likely to perpetuate child physical abuse, and so Dyslin and Thomsen (2005) investigated their likelihood of committing child physical abuse such as burning, choking, or hitting a child with a fist (CPA) along with Catholics and irreligious participants (p. 292). They discovered that Conservative

Protestants did not perpetuate CPA significantly more than any of the other religious groups. The only other aspect of religion that seemed to predict CPA was extrinsic religiosity, a term that roughly describes when religion is used as a means to an end (p. 292). Intrinsic religiosity, by contrast, is a term that describes practicing religion for its own sake. While in this study extrinsic religiosity is seen as a negative aspect of religion, it can overlap with intrinsic religiosity since many people who are intrinsically religious can enjoy the social aspects of going to church as well (Gorsuch & McPherson, 1989).

However, extrinsic religiosity can be a negative aspect of religiosity and has been associated with racial prejudice, immaturity, and self-serving biases (Donohue, 1985). Dyslin and Thompsen (2005) measured religiosity and child abuse risk in 436 college students. They did not find a difference among Conservative Protestants, Mainline Protestants, religiously unaffiliated, or Catholics in CPA risk. They did, however, find a significant positive correlation between extrinsic religiosity and CPA risk, meaning that going to church to gain friends, to network, etc. was related to the potential to abuse children ($r = .15$, $p < .001$). Religious interest was not related to CPA risk, suggesting that religion alone is not sufficient to cause CPA motivation. It is compelling if the relationship to extrinsic religiosity is relatively weak, and there is no negative correlation between CPA risk and intrinsic religiosity. This lack of relationship may be because both people who practice religion for religion's sake and people who do not are at risk for perpetuating child abuse. Perhaps the human element of religion has the potential to be destructive, that when any belief system is adopted by broken human beings, chaos can result. Religion may be uniquely powerful because it claims ultimate authority over life and death.

How does abuse affect religious expression, in general? Experience of abuse tends to increase feelings of doubt and of distance from God. This pattern exists even in individuals who are deeply committed to their faith (Kennedy & Drebing, 2002). Kennedy and Drebing surveyed 3581 church members, asking them to rate their degree of religious doubt and feelings of closeness to God. They also answered questions concerning traditional spiritual behaviors such as prayer and Bible reading as well as transcendent spiritual behaviors such as speaking in tongues, miraculous healings, and visions. The authors did not find a significant relationship between abuse history and closeness to God ($\beta = -.02$, $p = n.s.$), but they did find a significant relationship between abuse and religious doubts ($\beta = .04$, $p = .05$). Out of all of the religious variables measures, only a relationship between transcendent religious experiences such as speaking in tongues was significant ($\beta = -.14$, $p = .0001$), suggesting that people with abuse histories may be more likely to have these types of experiences. A measurement of time since abuse may have been helpful in determining the trajectory of coping with abuse—perhaps at first, abuse causes loss in spiritual interest, especially religion-related abuse, but that interest could return with time.

Is religious doubt a variable that stays relatively constant in the lives of people who have been abused? Not necessarily. Murray-Swank and Pargament (2005) developed an intervention aimed specifically at healing broken relationships with God for female victims of sexual abuse. One client in this study began the sessions feeling angry with God and asking why he had abandoned her, even though she considered her faith strong and was highly dedicated to her faith. The sessions first focused on images of God—what God looks like to each person, what his personality is. They then transitioned to themes of spiritual struggles with God over why the abuse happened and then on establishing spiritual connections by joining with the suffering of

Jesus. Although this particular client did continue to struggle with her faith, her relationship with God became significantly more positive. The study only included two participants, but it at least offers hope that for religious abuse victims, spiritual struggle may not always be a constant, but can slowly be eroded away with time.

Coping with trauma

Religious traumatic events and traumatic events in general shake a person into questioning the world they live in, their relationships with others, their values, and their goals. When dealing with the effects of trauma or even with everyday stress, people use a variety of strategies to manage that stress. Freud began by discussing defense mechanisms, a type of coping as part of a person's internal environment, yet most of the mechanisms he described were negative coping patterns (Freud, 1935, p. 259). He postulated that defense mechanisms protected the individual from internal, instinctual threats.

Alfred Adler disagreed with Freud, maintaining instead that defense mechanisms are safeguards which serve to protect the person from the external environment (Adler, 1908, p. 36). Contemporary scholars who study defense mechanisms maintain that they protect against both internal and external forces (Snyder, 1999). Although Freud's defense mechanisms are similar in action to coping mechanisms, they are not identical. Defense mechanisms tend to focus on dealing with a person's past and are more negative, unconscious, and maladaptive (Snyder, p. 7). Coping, by contrast, tends to focus on the future and is more conscious. Coping theory was not described explicitly until Richard Lazarus's 1966 book, *Psychological Stress and the Coping Process* (Folkman & Moskowitz, 2004). Instead of emphasizing pathology as the psychoanalytic theorists had, Lazarus described the ways that ordinary people cope with the stresses of everyday

life (Lazarus, 1966, p. 66). He developed a cognitive theory of coping that focused on how individuals appraise stressful situations. As Lazarus describes coping:

> *"[It happens] when the individual discovers some important motive or value is being threatened, coping activity is being mobilized by virtue of this threat, by virtue of the cognition that 'My life, health, wealth, or cherished social relationships that are in danger'"* (Lazarus, 1966, p. 153).

This definition does not describe coping as a stable personality trait but as a developmental process with a reciprocal interaction between the person and the environment. Lazarus maintained that individuals use two levels of appraisal: primary appraisal, where the person decides if the problem is an important threat, and secondary appraisal, where the person evaluates available resources for coping with the problem (Lazarus, p. 155). Only if the problem is identified as a vital threat does the person enter into secondary appraisal. Then, the person uses one of two main types of coping: Problem-focused coping and emotion-focused coping. Problem-focused coping directly controls or changes the situation (e.g. generating alternative solutions, learning new skills, or removing barriers). Emotion-focused coping involves managing feelings related to the problem (e.g. wishful thinking, seeking emotional support, or social comparison). For any one problem, both types of coping may be beneficial or one method may be more helpful over the other depending on the situation and the person (Lazarus, p. 208).

Religion and coping: General trends

Separate from general coping research, religion has been studied as a means for coping with stress. Researchers who have explored the general connections between religion and psychological health in response to stress have discovered more positive connections than negative ones. Davis, Kerr, and Kurpius (2003) studied religion and anxiety in at-risk youth who had an impoverished family background, were minority group members, had few role models, showed delinquent behavior, or did not fulfill their academic potential. These youth were recommended by teachers for participation in a workshop program for talented youth because of leadership abilities or some outstanding academic abilities. Davis et al. measured trait anxiety, state anxiety, religiosity, and social resources. They found a significant negative correlation between trait anxiety and spiritual well-being for males ($r = .58$, $p < .01$) and between trait anxiety and intrinsic religiosity for males ($r = -.45$, $p < .05$). They did not find any significant relationships between trait anxiety and any measure of religiosity for females, which Davis and colleagues supposed might be due to females' higher anxiety scores. Their results support the contention that at least for men, spirituality plays a key role in helping people with difficult life experiences to cope with everyday life.

An especially salient example of religion's relationship with trauma is the terrorist attacks on September 11, 2001. As Seirmarco and colleagues have described, religion deeply affected the way that people who lost loved ones as a result of the attacks dealt with the attacks (Seirmarco et al., 2012). The researchers recruited bereaved adults to participate in the study, and they measured trauma exposure by asking what their relationship was to the deceased. Seirmarco et al. examined the effect of religion retrospectively by asking how important participants'

religious beliefs were before and after 9/11. While this is not a particularly sensitive measure of religion, it does support other studies with more sensitive measures which have achieved similar results. The authors also measured PTSD symptoms along with other mental health outcomes. In this sample, 21% of the 608 respondents tested positive for PTSD, a much higher rate than the national average. They discovered that religion became more important for some participants after 9/11 but not for others—for example, people who lost a child reported less importance of religious beliefs than people who suffered a different loss (OR = 1.81, 95% CI [0.99, 3.28], p = .07). When religion became less important for participants, they were almost 3 times more likely to suffer from Complicated Grief, 2.5 times more for Major Depressive Disorder, and almost 2 times more for PTSD. Increased importance of religion was not associated with any mental health outcomes, positively or negatively.

This may suggest that religion is a catalyst for positive coping, meaning that it makes positive coping possible but does not directly create positive change. This would explain why lower levels of religiosity are associated with maladaptive coping (psychological distress). Or more likely, the lack of sensitivity of Seirmarco et al.'s religiosity measure and its retrospective design may have skewed their results. Presumably, there are healthy and unhealthy ways to practice religion. For example, if people believe they have been abused because God is punishing them, this would be an unhealthy religious belief. If beliefs such as these became more important as a result of a traumatic event, they could lead to detrimental mental health outcomes. Alternatively, a person could believe that God suffers with him or her before a traumatic event, and then believe that more strongly after the trauma. This would be a healthier religious belief, and may prevent negative mental health outcomes. If people who take both approaches report

changes in their beliefs in the same sample, results could show no relationship between increased importance of religion and psychological disorders.

This exemplifies why measures of religion must be sufficiently complex—because religion has been developing complexity for thousands of years, and when combined with infinitely complex human beings, the effect of religion can vary greatly (Hill & Pargament, 2008). Others tend to use simpler, less sensitive measures for religion such as church attendance or one-item measures of religious change. This may explain why many of them produce conflicting results. Some studies may simply measure religion or religious interest, calculate the relationship between those variables and mental health symptoms, and infer that religion causes these symptoms. Religion is, however, an intricate construct. Measuring religious interest or practice cannot adequately describe the nuances of religion's effect on trauma (Hill & Pargament, p. 5). Some ways of practicing religion may exacerbate psychological disorders such as legalism, while others may protect against them.

One could examine religion's effect on coping with trauma by isolating a single variable and focusing on it, as Clements and Ermakova did. They hypothesized that one particular aspect of spirituality may be especially helpful in dealing with stress: surrendering problems to God (Clements & Ermakova, 2011). Clements and Ermakova described surrender to God as submitting one's will to God, especially when they submit to his will even when it differs from their will. They discovered significant negative relationships between surrender and trait anxiety (r = -.12) and surrender and state anxiety (r = -.16) in a population of college students. While these correlations were statistically significant, they are relatively small. Further research could further illuminate these relationships.

To measure the correlation between surrender to God and stress in a particular situation, Clements and Erma recruited a sample of pregnant women, most of whom had high-risk pregnancies. They measured pregnancy-related stress and surrender to God, and found a significant negative correlation between stress and surrender (r = -.20). Women who surrendered to God more had significantly lower stress levels, even when the researchers controlled for age, marital status, education, and number of children. Clements and Ermakova conducted the study in Southern Appalachia, which has a highly religious yet unhealthy population. They suggested that surrender to God, because it reduces stress, may better account for positive effects of religion on health than simply religiosity. Surrender to God is also related to intrinsic religiosity, which is practicing religion for religion's sake instead of primarily for one's own benefit. Similarly, since positive religious coping is said to depict a positive relationship with God, perhaps this explains why positive religious coping (which includes surrender to God) often is related to fewer symptoms of psychological distress.

Many studies of religion simply measure religion using scales, and then researchers calculate the relationship between these religious constructs and psychological variables. A more direct approach is examining the effect of engaging in religious thinking about trauma on immediate psychological outcomes such as mood. The current study is inspired by a study using a similar approach executed by Exline and colleagues (Exline, Smyth, Gregory, Hockemeyer, & Tulloch, 2005). They examined 15 participants with PTSD, and asked them to write three separate essays: one describing the trauma in detail and asking them to experience deep feelings as they write; and one organizing the traumatic event in story format with a beginning, middle, and end and expressing how it changed their beliefs about themselves and the world; and a final essay discussing new insights that they had gained in the process of writing the last two essays.

The prompts did not openly discuss religion, but the authors coded the essays for religious content such as mentioning God or prayer. These religious references were further coded for positive or negative meanings such as increased faith in God or anger at God and also for personal engagement in religion such as prayer. After participants wrote the essays, they rated their current feelings on two dimensions: valence and physiological arousal along with current feelings of distress.

A strength of this study is that it was highly realistic because it measured religiosity as participants chose to express it independently. In fact, 80% of participants did discuss religion in their essays without prompting from the researchers. Using religious language at any point was not related to changes in mood, similar to the results of other studies that use less sensitive measures of religion ($F(1, 21) = 1.14$, p = n.s.). Exline et al. found that using religious language predicted fewer pleasant moods during the first session than those who did not use religious language ($t = 2.45$, p = .02), but by the third session using religious language predicted more pleasant moods while those who did not continued to experience lower moods. Positive religious references were significantly related to positive moods ($t = -2.53$, p = .03) but not to arousal, whereas negative religious references were unrelated to positive or negative moods but were significantly related to increased arousal ($t = 2.13$, $p < .05$). Engagement in religious practices was significantly related to positive mood ($t = -2.74$, p = .009) and less distress ($t = -3.09$, p = .004).

Whereas this study does not prove that positive approaches to religion cause worsening PTSD symptoms, its direct approach provides more convincing evidence that religious thinking can have marked mood effects, even when not directly elicited. The reversal of religion's effect for those who used religious language may demonstrate that the more people process trauma in

religious terms, the more powerful religion is in affecting coping. Perhaps if these prompts were framed in a religious manner, the effect of religion would be more potent, and these results would be even more prominent.

Although often researchers who measure religion's effect on coping find positive effects of religion, some researchers have found negative effects. Connor, Davidson, and Lee (2003) used random digit dialing to recruit participants who had experienced violent trauma such as assault for their study. They measured physical and emotional health, resilience, general spirituality (e.g. belief in God's existence or belief that life has a purpose), reincarnation beliefs, and PTSD. They found a significant relationship between general spiritual beliefs and trauma-related distress ($B = -.02$, $p < .01$) and between general spiritual beliefs (such as the existence of God or life having destiny) and more severe PTSD symptoms ($B = -.29$, $p < .001$). Resilience, by contrast, was significantly associated with less severe PTSD symptoms ($B = -.65$, $p < .001$).

Connor and colleagues (2003) reasoned that religion may become more important for those who are less resilient and may be experiencing especially difficult life circumstances (p. 491). It is also possible that the trauma caused by religious people or situations can be so great that religion worsens symptoms rather than alleviating them. Connor et al. allowed for this, suggesting that religion may decrease well-beingthat may strengthen religious beliefs which then might strengthen well-being. They also did not observe participants over time. As Exline and colleagues (2005) have demonstrated, religious beliefs may be associated with more distress in the beginning, but become associated with less distress by the end because the stressful period is part of the healing process.

Some studies report both positive and negative effects of religion. For example, one body of research assessed religion along with other factors and PTSD in Jews and Arabs exposed to terrorism in Israel (Hobfoll et al., 2008). Israeli residents participated in telephone interviews and were assessed according to religious categories familiar to Jews and Arabs: secular (not religious), traditional (observing some religious laws), religious (observing most religious laws but with a modern lifestyle), and very religious (observing all religious laws). Among Jews, greater religiosity was associated with posttraumatic growth, or increased intimacy or sense of meaning from trauma. Jews in traditional or religious categories were more likely to experience more posttraumatic growth than secular Jews. By contrast, traditional Jews were three times more likely to meet criteria for PTSD than secular Jews.

When the researchers restricted their analyses to people who had personally experienced acts of terrorism, traditional Jews were more than three times as likely to be diagnosed with PTSD compared to secular Jews. For Arabs, religiosity was not related to posttraumatic growth or PTSD. However, in Jews posttraumatic growth was also associated with greater levels of PTSD, which may suggest that religion may not be negative in itself, since posttraumatic growth is also a positive construct. Also, only traditional Jews were more likely to experience PTSD, not very religious Jews or religious Jews, suggesting that the contribution of religiosity is complex. Traditional Jews may have some destructive beliefs that more religious Jews do not. Or conversely, religion may be more necessary for people who experience extreme trauma. For example, for Jews religiosity was correlated with greater exposure to terrorism. Perhaps trauma has a way of strengthening faith more than the reverse.

Positive and negative religious coping

Especially during difficult times, many people turn to religion as a source of strength and comfort. Some might say later, "I don't see how I would ever gotten through that situation without God" or "The support of the people in my church helped me to come out of my situation a better person than I was before." Religious coping fits into the categories of emotion-focused coping or problem-focused coping fairly easily, but it may add an extra dimension to it (Pargament, 1998). Religious people can pray to feel better about a situation (emotion-focused) or they can ask their church members for help with making meals (problem-focused), for example. Yet many studies have produced mixed results—some suggest that religion promotes better psychological adjustment, and others say the opposite (Ano & Vasconcelles, 2005).

Generally, coping is value-neutral and can be helpful or maladaptive depending on the situation. The most popular model of religious coping was developed by Pargament, Smith, Koenig, and Perez (1998). They divided religious coping into two broad categories: positive religious coping, which "reflects a sense of spirituality, a secure relationship with God, a belief that there is meaning to be found in life, and a sense of spiritual connectedness with others," and negative religious coping, which "is an expression of a less secure relationship with God, a tenuous and ominous view of the world, and a religious struggle in the search for significance" (Pargament et al., 1998, p. 712). The RCOPE scale measures several types of positive religious coping such as seeking comfort from God, using religion to help with forgiving others, or finding support from clergy or church members. It also measures many kinds of negative coping, including but not limited to seeing the stressor as punishment from God, blaming the devil for the situation, of expressing dissatisfaction with God.

Because religion involves values, Pargament created categories that are not value-neutral. Positive religious coping is thought to be associated with positive psychological outcomes, whereas negative religious coping is thought to be associated with negative psychological outcomes, although that is not always the case (Ano & Vasconcelles, 1995). This religious coping model examines many facets of religion that can contribute to positive or negative coping such as religious helping, spiritual connection, or reappraisal of God's powers (Pargament, 1998). These specific methods of religious coping can be grouped into positive and negative categories, and many of the methods within these categories intercorrelate. Pargament turned these factors into a full-length scale called the RCOPE (a shorter version is called the Brief RCOPE).

Pargament's first study testing the validity and reliability of the RCOPE involved people who had been exposed to several traumatic events: the Oklahoma City bombing, bereavement or serious breakup, or severe medical illness. It especially striking that Pargament first tested the RCOPE on traumatized population considering how much the RCOPE has been used in contexts other than profound trauma. A quick PsycNet search yields studies spanning many topics using the RCOPE, including those investigating physical health, depression, and quality of life. In his study on the Oklahoma City bombing, Pargament found a weak relationship between positive religious coping and PTSD, but a stronger correlation between negative religious coping and PTSD symptoms.

He replicated the study with a college student population, selecting students who had lost loved ones or who had experienced a severe breakup. For this population, he did not find a relationship between positive religious coping and emotional distress or physical health but he

did find a moderate correlation between positive religious coping and stress-related growth. He also found a slight relationship between negative religious coping and emotional distress, poor physical health, higher psychosomatic symptomatology, and stress-related growth. In the hospital sample, Pargament discovered a significant relationship between negative religious coping and more medical diagnoses, more difficulty functioning, and more cognitive problems. Also in the hospital sample, he found a moderate correlation between negative religious coping and depression, but negative religious coping was not related to health problem severity. In general, he concluded that positive religious coping resulted in better health outcomes, and negative religious coping in worse health outcomes, but he did find some discrepancies. Some indicators of poor health such as PTSD were associated with both positive religious coping and negative religious coping, especially in the hospital sample. Other studies have also described these discrepancies (e.g. Gerber, Boals, and Schuettler, 2011). He posited that an extreme stressor such as severe illness may mobilize both positive and negative religious coping, although this would conflict with his previous results that show negative religious coping is associated with more PTSD symptoms. Since Pargament's original studies, many researchers have examined his RCOPE in various traumatic contexts (e.g. in POW situations, Feder et al., 2008).

Ano and Vasconcelles's (2005) results showed a positive relationship between positive religious coping and positive psychological adjustment to stress (cumulative effect size = .33) and a modest negative relationship between positive religious coping and negative psychological adjustment (cumulative effect size = -.12). Also, as they expected, there was a significant direct relationship between negative religious coping and negative psychological adjustment (cumulative effect size = .22). Yet surprisingly, they did not find a significant relationship

between negative religious coping and positive psychological adjustment (cumulative effect size = .02). This may suggest that negative religious coping, as many religions teach, may be a part of the spiritual struggle that comes before spiritual peace and psychological wholeness. Negative religious coping may not always be hurtful. In general, though, negative religious coping was related to negative psychological outcomes that can include PTSD, and positive religious coping was related to positive psychological outcomes.

Even though reactions to extreme stress can vary, one study demonstrated that positive religious coping is possible even for those who have experienced extreme trauma. One group of researchers examined Vietnam veterans who were held as prisoners of war (Federet al., 2008). The study primarily examined religious coping as one aspect of posttraumatic growth, along with other factors. The mean age of the participants was 66.7 years, and their mean age of capture was 30.6 years, meaning that most of them had significant time to process their captivity and derive meaning from it. The majority of the respondents used positive religious coping and few used negative religious coping, and there was a relationship between posttraumatic growth and positive religious coping ($r = .33$, $p \leq .10$). Although this correlation is not significant, it is remarkable that veterans who have experienced extreme duress would overwhelmingly use positive religious coping methods. The length of time since their captivity could be a real-life projection of Exline et al.'s (2005) findings. As the veterans had years to process their time of imprisonment, they could have developed positive religious coping patterns that did not exist before. Exline et al.'s study does not directly support this conclusion, but it does suggest that question.

Like Pargament's original findings, most of the literature on PTSD correlates negative religious coping with PTSD and positive religious coping with psychological health, with some caveats. Gerber, Boals, and Schuettler (2011) used a large sample (N = 1,016) of college students for their study on PTSD and religious coping. They asked participants to complete measures of overall coping, religious coping, trauma exposure, PTSD, and posttraumatic growth. They did find a significant positive correlation between posttraumatic growth and positive religious coping (r = .28, p < .001) and between PTSD and negative religious coping (r = .31, p < .001). Negative religious coping was also weakly related to posttraumatic growth (r = .12, p <.001) and positive religious coping was weakly associated with PTSD (r = .1, p < .01). Negative religious coping was a significant but weak predictor of posttraumatic growth (t = 1.96, p < .05), but was a strong predictor of PTSD (t = 4.33, p <.001).

Positive religious coping was one of the strongest predictors of posttraumatic growth out of all of the variables examined in the study. For females, positive religious coping was a significant mediator of posttraumatic growth (Sobel = 2.88, p < .05). Positive religious coping also predicted post-traumatic growth more than emotion-focused coping, avoidant coping, gender, and race, meaning that it could be a vital factor in studies of posttraumatic growth. Possibly if the study population had experienced more intensely traumatic events, relationships between religious coping, posttraumatic growth, and PTSD would have been stronger. Yet the weaker correlations between posttraumatic growth and negative religious coping and PTSD and positive religious coping do not necessarily contradict Pargament's (1998) conclusions. Rather, spiritual doubts at one point in time could result in personal strength later. The correlations were also weak, even though they were significant. Since this study was not longitudinal, it could not demonstrate the effects of using a particular coping style over extended periods of time. Perhaps

positive religious coping, over time, could reduce PTSD symptoms. It is important to remember that the strongest correlations appeared as expected, although opposite results should not be ignored.

Harris Erbes, Engdahl, Olson, Winskowski, & McMahill (2008) also examined the role of positive and religious coping in dealing with many types of trauma, obtaining a sample of 327 trauma survivors from a church-going population from multiple Christian denominations. They discovered that PTSD symptoms were positively related to negative religious coping ($r = .41$, $p < .01$), fear and guilt ($r = .32$, $p < .01$), and alienation from God ($r = .27$, $p < .01$). Posttraumatic growth was, as expected, correlated with positive religious coping ($r = .37$, $p < .01$). Religious strain (e.g. fear and guilt, alienation from God, and religious arguments with others) was also a significant predictor of PTSD symptoms ($\beta = .32$, $p < .001$). Seeking spiritual support, by contrast, was a significant predictor of posttraumatic growth ($\beta = .47$, $p < .001$). They also analyzed specific functions that prayer can serve in believers' lives: It provides acceptance, provides assistance, provides calm and focus, and prayer's absence. This was a part of seeking spiritual support, and may be an important part of how positive religious coping increases personal growth in trauma situations.

Exceptions to the rule

Often coping is assumed to depend on the situation—in other words, a tragic circumstance causes a person to cope in an unhealthy way. The more tragic the circumstance, the more difficulty the person has in coping. Perhaps this is true in many cases. Few clinicians would blame a hurricane survivor for having trouble trusting in the goodness of the world and the goodness of other people. Yet not every survivor reacts to trauma in the same way: One may

struggle with personal doubts and questions, while another may grow stronger because of the trauma. These differences may be due to differences in personality (Maynard & Gorsuch, 2001). Maynard and Gorsuch assumed that participants who experienced the most severe trauma would use more negative religious coping strategies (measured using the RCOPE) such as making choices without involving God than participants who experience less severe trauma. Yet they found no relationship between selection of a coping style and type of trauma (R = .11, p = n.s). Other factors, such as personality, may contribute to the development of religious coping styles.

One phenomenon that demonstrates this principle is that of resiliency. People who are resilient endure difficult situations, but they thrive in the midst of them and change for the better as a result of the difficult circumstance. (That being said, many factors within and outside of personal control impact coping. A person should never be blamed for reactions to trauma.) If any situation would be least likely to produce benevolent outcomes or resiliency, it would be torture. Torture is an experience that is especially traumatic because it is unpredictable, uncontrollable, and inescapable (Kira et al., 2006). Torture is painful mental or physical acts that are meant to obtain information, punish, or intimidate or coerce a person. It almost always causes a mental disorder, including PTSD or complex PTSD. Kira and colleagues studied Iraqi refugees in Michigan who had experienced torture, most of whom practiced the Muslim religion.

Kira et al. discovered that the more additional trauma participants experienced, the more PTSD and trauma disorders they exhibited. Torture was not related to any of these disorders (For PTSD, β = .03, p = .56; for Cumulative Trauma Disorders, β = .01, p = .88). Torture was negatively related to suicidality (β = -.251, p = .0001), so that the more torture a person experienced the less suicidal he/she became. This seems to be evidence of resilience in the face

of torture, although it could be because a threat to one's life makes one want to protect it more strongly. People who had been tortured were more tolerant of other cultures (t = -2.42, p = .016) and religions (t = -2.51, p = .013) than people who had not been tortured, perhaps because they had learned from their experience what it feels like to be marginalized and misunderstood. Those who had been tortured showed stronger control, concentration, and memory (t = -2.72, p = .007) as well as peace of mind and better mental health (less depression and anxiety; t = -2.04, p = .042). Torture also predicted more religiosity, not less, as would be expected (β = .15, p = .001). These results would not be intuitive since in Kira et al.'s study, torture seems to have improved those who suffered from it. The paradox of trauma research is that people who suffer from trauma usually experience harmful effects long-term, but some people seem to become stronger and better adjusted as a result of it, even having stronger religious faith.

Trauma and forgiveness

A single traumatic event can have a tremendous effect on a person's worldview and outlook on life, especially when the event happened because of the actions of another person. It can lead the sufferer to distrust others' intentions, but more importantly, it can lead a person to distrust his/her own abilities. People who have endured especially violent trauma may even have to work through forgiving God himself (Murray-Swank & Pargament, 2005). The concept of forgiveness is easily misunderstood, and it can cause people who experience abuse to stay in dangerous situations because they feel the need to "forgive" the perpetrator (Nason-Clark, 2004). For survivors of violent crimes, it can be difficult to define the line between forgiveness and permissiveness, between forgiveness and enabling abuse (p. 304).

At the other extreme, it can seem unjust to forgive the perpetrator because it may seem to ignore a victim's need for compensation. As Worthington (2006) argues, forgiveness and justice should be present together so that the perpetrator is held accountable for her/his actions, but is also drawn into harmony with the community. Worthington distinguishes between two types of forgiveness: decisional forgiveness, and emotional forgiveness. Decisional forgiveness is where the victim purposely changes behavior in order to act in a forgiving way by not avoiding the person, treating the person well, not holding a grudge, etc. Emotional forgiveness is different in that it involves restoring positive feelings towards the person. Sometimes decisional forgiveness facilitates emotional forgiveness, and sometimes emotional forgiveness happens on its own.

According to Exline et al., psychologists generally agree that forgiveness involves a conscious decision to forgive, that it "does not imply forgetting, condoning, or excusing offenses, and [that] forgiveness does not imply reconciliation, trust, or release from legal accountability" (Exline, Worthington, Hill, & McCullough, 2003, p. 339). There is quite a bit of controversy among psychologists about whether forgiveness requires the restoration of positive feelings towards the offender or not (Worthington, 2006, p. 163). Complicating forgiveness research is the fact that most laypeople have different beliefs about forgiveness than most psychologists. For example, in one survey of 1,002 Americans, 66% agreed that, "If you genuinely forgive someone, you should be able to forget what they have done to you" even though experts would disagree with that statement (Exline et al., 2003). This confusion may explain why battered women who are religious are more likely to see staying with their abusive spouses as an act of forgiveness.

Davis, Hook, and Worthington (2008) examined the role of religious coping among other factors in the forgiveness process. They asked participants to think of a time when someone hurt or offended them, and then they wrote short descriptions of what happened, thinking in detail about the event. Davis et al. then measured the students' forgiveness of the perpetrator, attachment to God, religious coping (RCOPE), and viewing the hurtful event as destroying something sacred. Because positive religious coping reflects a healthy relationship with and thus attachment to God, negative religious coping would reflect a less secure and weaker attachment to God. They found that forgiveness was positively correlated with positive religious coping (r = .15, p = .06) and negatively correlated with negative religious coping (r = -.30, p < .01). Forgiveness was also negatively related to both anxious (r = -.31, p < .05) and avoidant attachment to God (r = -.25, p < .05). They also discovered that positive and negative religious coping partially mediated the relationship between forgiveness and attachment to God ($\chi^2(120)$ = 250.34, p < .01, CFI = .96, RMSEA = .08). Attachment to God only affected forgiveness of another person when the person used religious coping methods. This means that a person's relationship with God only affected how much they forgave another person when the participant actively utilized religion to cope. Religious coping, therefore, plays a vital role in the forgiving process.

Religiosity alone, unlike positive religious coping, may not be enough to predict forgiveness (Davis, Hook, Van Tongeren, and Worthington, 2012). Davis and colleagues recruited participants who had been hurt by a romantic relationship in the past 8 weeks to complete measures of religious commitment (personal importance of religion), forgiveness, and sanctification of forgiveness, which measures the extent to which a person believes forgiveness is the will of God, how much their unforgiveness hurt their relationship with God, and spiritual

commitment. They discovered that forgiveness alone was unrelated to religious commitment—meaning, being deeply devoted to one's faith does not make one a forgiving person. They did find a relationship between sanctification of forgiveness and religious commitment, especially if participants believed forgiveness is the will of God (*est* = .71, *SE* = .35, p = .044). The interaction between time since the offense and viewing unforgiveness as something hurtful to one's relationship with God approached significance (*est* = .02, *SE* = .01, p = .094). This signified an association between viewing unforgiveness as hurtful to one's relationship with God with faster forgiveness. Forgiveness must be an integral part of a person's faith and worldview in order for one's relationship with God to affect it, both in trivial situations and in trauma situations.

McCullough, Root, and Cohen (2006) developed an experimental paradigm for increasing forgiveness through benefit-finding. They recruited 304 undergraduate participants and asked them to remember the most recent situation when someone they are in a relationship with hurt or offended them. McCullough et al. randomly assigned participants to one of three groups where they had to write an essay for 20 minutes: the control group, who wrote an essay about their day and their shoes, the experimental group, who wrote about the benefits of the transgression in detail, and a traumatic features group who wrote about the details about what the person did that was wrong. After the writing condition, the researchers administered a scale assessing the extent to which they reduced negative motivations toward the offender and promoted positive motivations toward them. They discovered that the benefit-finding condition revealed significantly lower revenge scores than the traumatic features group (*M* = 2.24%, *SD* = .68%, 95% CI: .82%-1.96-2.52%, p = .02) and the control group (*M* = 1.1%, *SD* = .68%; 95% CI: .82-1.37%, p < .001). Participants in the traumatic features group were also more likely to

use words related to the personal cost of the offense than the benefit-finding group (*M* = 1.87%, *SD* = 1%, 95% CI: 1.69-2.05%). Simply 20 minutes of benefit-finding was enough to increase forgiveness levels for a personal relationship-related offense.

Self-forgiveness and trauma

One of the most important people for victims to forgive after a traumatic event of any kind is him/her self. A large part of a reaction to trauma involves difficulty forgiving oneself, even if uncontrollable events directly caused the trauma. A couple of studies have examined the role of self-forgiveness in adjustment to breast cancer, a traumatic condition that can bring about PTSD in some cases. When women are diagnosed with cancer, sometimes they blame themselves for causing their cancer by not eating properly, being too stressed, or being a negative person. These self-blaming thoughts may be damaging (Friedman et al., 2007). Friedman and colleagues assessed trait self-forgiveness, self-blame, mood disturbance, and quality of life in 123 women diagnosed with breast cancer. They discovered a significant negative relationship between having a self-forgiving attitude and mood disturbance (r = -.44, $p < .001$). Self-blame also partially mediated the relationship between self-forgiving attitudes and mood disturbance and quality of life (z = -2.72, p = .006). Participants who did not blame themselves were more likely both to forgive themselves for their illness and to be better adjusted to their cancer. This suggests that self-forgiveness and self-blame both play important roles in coping with traumatic events.

Friedman and colleagues also authored another study on breast cancer and self-forgiveness, this time examining the role of spirituality along with self-blame and self-forgiveness (Friedman et al., 2010). Participants (*N* = 108) completed measures of self-blame,

trait self-forgiveness, and spirituality as it relates to illness. The spirituality measure assessed the patient's sense of meaning and peace and the role of their faith in illness. Trait self-forgiveness is a personality characteristic, and does not show how much a person forgives herself for a specific incident. Participants who were more spiritual (r = .63) and who were more self-forgiving (r =.37) had a significantly better quality of life than those who were not ($p < .01$). Therefore, examining more precisely the impact of spirituality on forgiveness may be helpful in improving the well-being of people who have experienced trauma.

More precise measures of self-forgiveness for specific incidences can aid in understanding how to change certain behaviors. Wohl, DeShea, and Wahkinney (2008) developed a scale to measure forgiveness for a particular transgression. Wohl and colleagues then utilized a short version of the scale to measure self-forgiveness for procrastination in 312 college students (Wohl, Pychyl, & Bennett, 2010). Students participated in the study between their first and second midterm and completed measures of procrastinating on studying ($\beta = .59$, $p < .001$) and self-forgiveness for procrastinating ($\beta = -.20$, $p = .02$). They also assessed positive and negative feelings about how they did on the first exam. The instructor of the course provided each participant's grades on the midterm exam as well. Wohl and colleagues discovered that procrastination for the first midterm and self-forgiveness for procrastination predicted procrastination before the second midterm. If participants procrastinated on the first midterm, they also procrastinated on the second one. If participants forgave themselves for procrastinating, they procrastinated less on the second midterm. There was also a significant interaction between procrastination and self-forgiveness so that higher procrastination for the first exam and more self forgiveness led to decreased procrastination before the second exam ($\beta = -.20$, $p = .02$). This

provides some support for the hypothesis that self-forgiveness for a particular transgression increases functioning, even for more trivial matters such as exams.

The manner in which people use religion to cope with trauma greatly affects mental health, so would it affect self-forgiveness? For the current study, I analyzed the effects of trauma and either a neutral writing task or one that emphasized positive religious coping on self-forgiveness for an everyday offense. I assessed participants for PTSD using the PTSD Checklist (Weathers et al., 1993) and for trauma history using the Trauma History Screen (Carlson et al., 2011). Participants completed Pargament's 1998 Brief RCOPE scale in response to an everyday event where they hurt someone, and then either wrote an essay using positive religious coping about the event or a control essay about their everyday routine and their shoes. All participants were assessed for self-forgiveness for a time when they hurt someone in an everyday event, and then they answered demographic questions. I had three hypotheses about the results of this experiment: 1) Those who had experienced more trauma would have lower self-forgiveness scores in accordance with Friedman et al., 2007, 2010; 2) Overall, those in the experimental group would show more self-forgiveness than the control group (McCullough et al., 2006); and 3) There would be a positive correlation between RCOPE scores in response to a specific event and self-forgiveness for that same event (Davis et al., 2008).

Participants

The study was originally designed to be administered online via SurveyMonkey, an online survey host. It was to be posted to online support groups for PTSD or other trauma-related problems. Each participant would be randomly selected to win a $50 Amazon.com gift card being identified. While the experiment was posted on one support group forum for PTSD, only

one forum member responded. This member did not complete the study. The study was then altered slightly and given to students (N = 81) at a small Christian liberal arts college. The students received a small amount of course credit in exchange for their participation. The completion rate for the study was 97.5% (n = 79 completed the study, and n = 2 did not). To protect study participants, the study received approval from the IRB at Houghton College and was first tested in a small pilot study and refined subsequently. Debriefing statements after study completion referred participants to suicide hotlines, online counseling services, and the college's counseling center in case participants experienced a crisis.

Measures

Religiosity

In order for non-Christians to feel comfortable completing the survey, the author selected a short 3-item scale measuring both spirituality and religiosity (Worthington et al., 2003). One item from the scale asked participants, "If spirituality is defined as qualities and characteristics of exemplary humanity (e.g. honesty, hope, compassion, love of humanity, etc. then to what degree do you consider yourself spiritual?" Participants then rated the items on a Likert scale from 1 = *Not at all* to 5 = *Very much*. I also asked participants to select their religious preference from a list, or to specify another religion.

PTSD symptoms and trauma exposure

PTSD was assessed using the PTSD Checklist-Civilian Version (PCL-C), a 17-item questionnaire developed by Weathers, Litz, Husker, and Keane (1994) for the National Center for PTSD. It is based on the criteria described in the DSM-IV, and participants are asked to rate

how often a problem has happened to them within the past month on a scale from 1 to 5, where 1 = "*Not at all"* and 5 = "*Extremely"*). For example, one item asks how much a person has experienced "repeated, disturbing memories, thoughts, or images of a stressful experience from the past." Cronbach's alpha for the PCL-C was reported to be high (.97) for the total scale as well as the subscales (.92-.93). Test-retest reliability was also high after 2-3 days (.96). Scores were interpreted conservatively, with a score of at least 30 indicating PTSD for civilians in primary care. From that cut point, the scale may be used to make a PTSD diagnosis. However, to make a more careful diagnosis, responses can be examined so that only those meeting DSM-IV criteria will be scored positive. Each score ranging 30 or above was examined so that the following criteria of the DSM-IV were met: at least 1 item in section B, 3 in section C, and 2 in section D. If a participant scored at least 30 points overall but did not meet the latter criteria, she/he was not scored as PTSD-positive.

The amount of traumatic events experienced was assessed utilizing a modified version of the Trauma History Screen, which was developed for the National Center for PTSD (Carlson et al., 2011). It assessed frequency of 14 potentially traumatic events, and participants clicked *No* or *Yes* to express if they have experienced a certain event (e.g. "A really bad car, boat, train, or airplane accident," they would click *Yes*). Then if they clicked *Yes*, they were asked to report how many times the event happened to them. At the end of the questionnaire, participants were asked if any of these had bothered them emotionally. The original scale also asked participants to describe each event that bothered them emotionally along with other questions used to diagnose PTSD, but these questions were eliminated for brevity.

Positive and negative religious coping

These two constructs were first evaluated using Pargament's 1998 Brief RCOPE scale. The Brief RCOPE contains 14 questions assessing how often participants used various religious coping methods in response to a situation where they hurt someone in an everyday situation (e.g. one positive coping method was, "Sought God's love and care" and a negative one was, "Questioned the power of God"). Cronbach's alpha for the positive and negative scales were at acceptable levels, .87 and .69 respectively. The negative religious coping subscale was reverse scored to reflect an overall measure of positive religious coping.

Positive religious coping was also manipulated experimentally, as participants in the experimental group were asked to write an essay for 20 minutes using positive religious coping methods. The instructions read as follows:

> Now we would like you to think about some time when you harmed someone in the past in a typical everyday situation. For example, forgetting an appointment, making an unkind comment, etc. For the next 20 minutes, we would like for you to write an essay about what you did to that person. As you write, please try to address the following points: (a) What actually happened in the situation? What did you do to the person? (b) After the situation, did you ever have times where did what you could to move on, and then put the rest into God's hands? Please describe these experiences. (c) After the situation, did you ever ask other people to pray for you about the situation where you hurt someone or look for support from people who follow the same belief system as you? This can include a clergy member, a friend, a family member, etc. who you have a spiritual relationship with. (d) Did you ever experience times as a result of hurting the person where you offered spiritual support to family and friends, tried to give spiritual strength to others, or prayed for the well-being of others? Please describe these experiences. (e)After the situation, did you ever try to think about spiritual issues to get your mind off what you did to the other person? Perhaps you prayed or focused on God to get your mind off your problems. (f) After the time you hurt someone, did you ever experience a total spiritual awakening, or try to find a completely new life through your religion or spirituality? Please describe these experiences in detail. As you write, really try to "let go" and try not to hold anything back. Be completely honest and candid.

Participants were asked to think of a typical everyday event where they harmed someone. An everyday event was chosen instead of an uncommon event so as not to evoke unnecessary guilt for patients who may have PTSD. The question was modeled after McCullough et al.'s (2006) prompt, but was modified by asking questions designed to elicit several of Pargament's (1998) positive coping methods.

Instead of using a prompt that would ask participants to use negative coping, a control prompt was substituted for ethical reasons. The participants in the control group were asked to write an essay for 20 minutes using the following prompt adapted from McCullough et. al (2006):

> For the next 20 minutes, we would like for you to write an essay about your plans for tomorrow. Please be very specific about these plans. Imagine yourself waking up tomorrow morning. From that moment on, what will you do? Please describe exactly what you plan to do, in order, and describe the routes you will take to and from all of the places you will go. If, after having written about your plans for tomorrow, you still have time left before the 20 minutes are completed, we would like for you to write about your shoes. Beginning with the pair of shoes that you are currently wearing, please describe them in detail. If time still remains in the 20-minute writing period, please also write about the other types of shoes that you own.

Self-forgiveness assessment

Wohl (2008) developed a scale to assess self-forgiveness in response to a particular offense. The scale is divided into two subscales: one assessing self-forgiving feelings and actions (e.g., "As I consider what I did that was wrong, I feel compassionate towards myself") and one assessing self-forgiving beliefs (e.g. "As I consider what I did that was wrong, I believe I am awful"). The participants are asked to rate each item in response to the same everyday situation in which they hurt someone that they answered RCOPE questions on earlier. The students then rated each item on a scale from 1 to 4, where 1 ="*Not at all"* and 4 = "*Completely"*). Wohl

reported that the Self-Forgiving Feelings and Actions subscale (SFFA) had a Cronbach's alpha of .74, and the Self-Forgiving Behaviors subscale (SFB) had a Cronbach's alpha of .89.

Demographic information

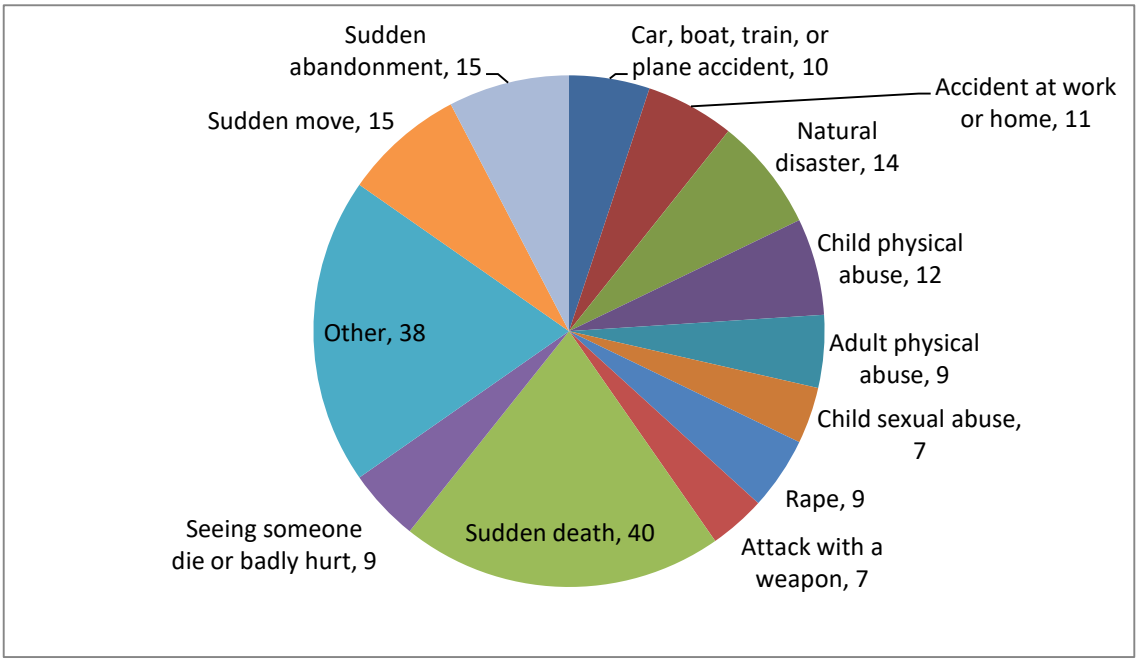
Participants filled out a portion of the survey indicating their gender, ethnicity, age, amount of education, residency, and primary language.

Results

Demographics and Trauma Characteristics

Since the population of Houghton College comprises a disproportionate number of female students when compared to male students, more women (*n* = 56) responded than men (*n* = 23, Two people did not specify gender). The students were at various stages in their college career, with 18.3% who only finished high school (*n* = 15), 74.4% who had completed some college (*n* = 61), 2.4% who had completed an associates degree (*n* = 2), and 1.2% who had completed a bachelor's degree (*n* = 1). Students were required to be 18 or older to participate. Most of the students were between the ages of 18 and 24 (*n* = 79, 97.5%, with 2 not specifying age). For the majority of the sample, English was their first language (*n* = 76) except for a small minority (*n* = 3). Approximately 95% had lived in the United States for the majority of their lives, with one student from each of the following countries: Cameroon, Thailand, Uganda, and Canada. The sample included members of several ethnicities: Hispanic (4.9%, *n* = 4), African American (2.4%, *n* = 2), Caucasian (86.6%, *n* = 71), Asian (3.7%, *n* = 3), and Native American (2.4%, *n* = 2). Out of the 81 participants, 8 screened positive for PTSD (9.8%).

Figure 1: Types of Trauma Reported (# of Participants)



Effect of trauma on religious coping and religiosity

For the PTSD Checklist, I counted the number of items each participant marked as moderate to severe (indicating more of a trauma reaction) and compiled them into a separate variable. I then performed a median split, differentiating those who checked more PTSD symptoms from those who checked fewer PTSD symptoms (*Mdn* = 10, *M* = 9.45). To test the hypothesis that those with more trauma symptoms would show less self-forgiveness, positive religious coping, and religiosity, I performed a series of independent samples *t*-tests. I did not find any significant differences between those who experienced more traumatic events (*n* = 35, *M* = 64.34, SD = 7.65) and those who experienced less (*n* = 45, M = 66.09, *SD* = 6.33) in positive religious coping (*t*(78) = -1.117, p = .267, two-tailed). I also did not find any significant difference between those with more traumatic symptoms (*n* = 35, *M* = 11.77, *SD* = 1.73) and

those with less traumatic symptoms (n = 47, M = 12.06, SD = 2.08) in their religiosity scores (t(80) = -.675, p = .501, two-tailed).

I compared those who met criteria for PTSD with those who did not meet criteria in self-forgiveness, positive religious coping, and religiosity scores using several independent samples t-tests. There were also significantly lower positive religious coping scores (t(79) = 2.303, p = .024, two-tailed) in the PTSD group (n = 9, M = 60.33, SD = 8.09) than in the non-PTSD group (n = 72, M = 65.85, SD = 6.60). No significant differences between the PTSD group (n = 9, M = 11.78, SD = 2.11) and the non-PTSD group (n = 74, M = 12, SD = 1.94) in religiosity were found, possibly due to a ceiling effect (t(81) = .321, p = .749, two-tailed).

I did not find significant differences in self-forgiveness scores between the positive religious coping group (n = 41, M = 65.63, SD = 12.34) and the control group overall (n = 34, M = 65.91, SD = 9.63), contrary to my hypothesis (t(73) = .107, p = .915, two-tailed).

Correlational analysis

As positive religious coping scores increased, self-forgiveness scores increased significantly (r = .383, p < .01, two-tailed). There was not a significant relationship between religiosity and positive religious coping scores (r = .184, p =.100, two-tailed). Contrary to my hypothesis, I did not find a significant correlation between positive religious coping and number of PTSD symptoms checked (r = -.162, p = .15, two-tailed).

I did find a highly significant negative correlation between number of PTSD symptoms checked and self-forgiveness, suggesting that as the number of symptoms increases, self-

forgiveness level decreases (r = -.420, p = .000, two-tailed). A correlation between number of PTSD symptoms checked and religiosity was not significant (r = -.142, p = .204, two-tailed).

Factorial ANOVAs

I first conducted a 2x2 (Condition: Experimental vs. Control x PTSD Diagnosis: Present or Absent) factorial ANOVA to determine the effect of PTSD diagnosis and treatment group on self-forgiveness scores. As expected, I found a significant main effect of PTSD diagnosis on self-forgiveness scores (See Table 1). Those with PTSD (n = 8, M = 52.38, SD = 13.77) had significantly lower self-forgiveness scores than those without PTSD (n = 69, M = 99.91, SD = 10.16). Condition (Experimental or Control) did not exhibit a significant main effect, and the interaction between Condition and PTSD Diagnosis was not significant. Those with fewer traumatic experiences in the positive religious coping group did not exhibit significantly higher forgiveness scores (n = 22, M = 70.77, SD = 10.39) than those with more traumatic experiences in the positive religious coping group (n = 14, M = 55.79, SD = 10.56). Those with fewer traumatic experiences in the control group (n = 12, M = 67.25, SD = 8.26) also did not exhibit significantly higher self-forgiveness scores than those with more traumatic experiences in the control group (n = 17, M = 64.12, SD = 10.87).

I also conducted a 2x2 (Condition: Experimental vs. Control x PTSD Symptoms: High vs. Low) Factorial ANOVA to measure the effect of PTSD symptoms and treatment group on self-forgiveness scores. The group with more PTSD symptoms (n= 32, M = 59.69, SD = 11.80) displayed significantly lower self-forgiveness scores than those with fewer PTSD symptoms (n = 44, M = 69.30, SD = 9.27). As predicted, I found a significant main effect for PTSD symptoms, with those with more PTSD symptoms reporting lower self-forgiveness scores (See Table 2). A

significant interaction between Condition and PTSD symptoms was a surprising result not predicted by my hypothesis (See Table 2 and Figure 3). The groups in order of lowest to highest self-forgiveness scores were as follows: high PTSD symptoms in the experimental group, high PTSD symptoms in the control group, low PTSD symptoms in the control group, and low PTSD symptoms in the experimental group. Those who had high levels of PTSD symptoms in the experimental group reported the lowest self-forgiveness scores (n = 14, M = 55.79, SD = 10.56). Those with high PTSD symptoms in the control group showed higher self-forgiveness scores than those in the experimental group (n = 17, M = 64.12, SD = 10.87), followed by those with low PTSD symptoms in the control group (n = 12, M = 67.25, SD = 8.26). Those with low PTSD symptoms in the experimental group reported the highest self-forgiveness scores (n = 22, M = 70.77, SD = 10.39).

Table 1

2 x 2 (Condition x PTSD Diagnosis) Factorial ANOVA Tests of Between SS Effects

Dependent Variable: Self-Forgiveness Total

	F	df	Pairwise Comparisons
Condition (Experimental vs. Control)	2.462	1	
PTSD Diagnosis (Positive vs. Negative)	10.358*	1	P < N
Condition x PTSD Diagnosis Interaction	1.668	1	

Notes. P = Positive for PTSD. N = Negative for PTSD.

* $p < .005$

Table 2

2 x 2 (Condition x High or Low PTSD Symptoms) Factorial ANOVA Tests of Between SS Effects

Dependent Variable: Self-Forgiveness Total

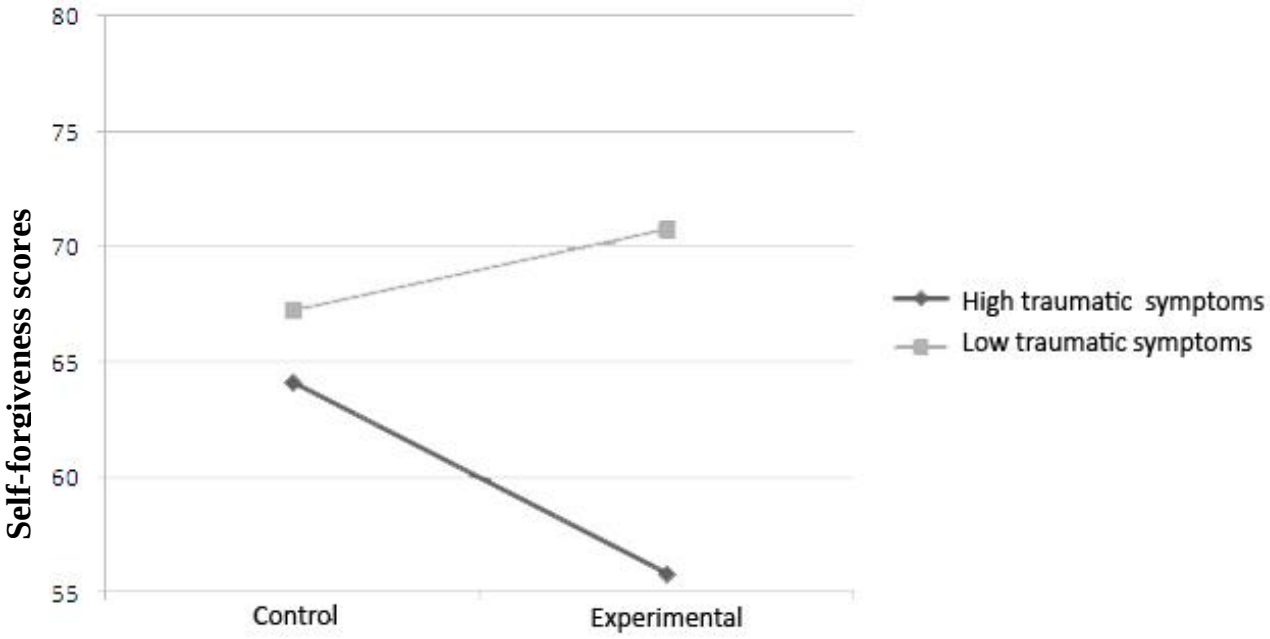
	F	df	Pairwise Comparisons
Condition (Experimental vs. Control)	.857	1	
PTSD Symptoms (High vs. Low)	12.159**	1	H < L
Condition x PTSD Symptoms Interaction	5.205*	1	HE < HC < LC < LE

Notes. H = High number of PTSD symptoms. L = Low number of PTSD symptoms. HE = Those with high PTSD symptoms in the experimental group. HC = Those with high PTSD symptoms in the control group. LC = Those with low PTSD symptoms in the control group. LE = Those with low PTSD symptoms in the experimental group.

** $p \leq .001$, * $p < .05$

Figure 3

Interaction between Condition (Control or Experimental) and Level of PTSD Symptoms (High or Low) on Self-Forgiveness Scores



Discussion

The results of the current experiment support the hypothesis that greater trauma exposure and more trauma-related symptoms are associated with less self-forgiveness. Participants who experienced a greater number of traumatic events and those who reported more PTSD symptoms showed significantly lower self-forgiveness scores than those who experienced fewer traumatic events and who reported fewer PTSD symptoms. These results are consistent with the results of several other studies in the literature. The new DSM-5 may specify blame of self or others as a possible symptom of PTSD as part of the negative cognitions and mood cluster of symptoms (American Psychiatric Association, 2013). Lower self-forgiveness has been related to negative psychological reactions to trauma, such as self-blame for illness in women with breast cancer (Friedman et al., 2007). Additionally, another group of researchers examined self-forgiveness in women with breast cancer, a significant and potentially traumatic diagnosis, and found similar results (Romero et al., 2006). Romero and colleagues assessed the participants for self-forgiveness scores using the Forgiveness of Self scale developed by Mauger et al. (1992). The FOS scale differs from the scale used in the current study because it assesses self-forgiving attitudes using items such as, “A lot of times I have feelings of guilt or regret for the things I’ve done.” The scale used in the present study (Wohl, 2008) assesses self-forgiveness in response to a particular situation. Romero et al. also measured spirituality using one item that asked participants to rate their spirituality on a 5-point Likert scale. The authors also distributed scales measuring overall quality of life and mood disturbance. Their results demonstrated that spirituality and self-forgiveness predicted mood disturbance ($R = 0.61$, $F(2, 60) = 17.99$, $p < 0.001$) as well as quality of life ($R = 0.61$, $F(2, 58) = 17.52$, $p < 0.001$). These results are similar to the results obtained from the current study which suggest that people with more posttraumatic symptoms have difficulty forgiving themselves.

Results from my study also showed that participants who had PTSD had significantly lower positive religious coping scores. Leaman and Gee (2011) discovered a positive correlation between negative religious coping and PTSD symptoms (r = .25) in African victims of torture who had immigrated to the United States. In addition to positive religious coping and negative religious coping, the authors measured public and private religious coping (e.g. church attendance and prayer, respectively). They found a significant interaction between physical torture and private religious practices, meaning that the effects of torture depend on private religious practices ($t(120) = 2.03$, $p < .05$). However, they did not find an interaction with either positive or negative religious coping, meaning that religious coping may have an effect that is distinct from religious practice. Another group of researchers found a correlation between spiritual discontent, a subset of negative religious coping, that approached significance (r = .12, p = .06) (Wortmann, Park, & Edmondson, 2011). In the present study, I did not find a relationship between religiosity and religious coping, or between religiosity and trauma exposure or posttraumatic stress.

Although the current study was unique in its experimental manipulation of positive religious coping, other studies with similar designs have been conducted to examine the effects of benefit-finding. McCullough and colleagues (2006), as previously described, asked participants to write either neutral essays or benefit-finding essays about a relationship-related offense. They then measured forgiveness for the event. Unlike the current study, McCullough et al. found decreased forgiveness of others after the benefit-finding condition (adjusted M = -0.31, SD = 0.95, 95% CI: -0.49, -0.12). My results indicated that those who experienced the most trauma experienced less self-forgiveness in the positive religious coping condition than in the control condition, the opposite results of those in the literature.

One variable that could have affected current results could have been time elapsed since the traumatic event. Exline et al. (2005) discovered that the longer participants actively processed the trauma using benefit-finding methods, the more likely they were to report positive moods afterwards. Another way of measuring time elapsed could be age, since those who are older have had more time to process life events. As age increases, ability to cope could increase. In their study of burnout among aid workers, Eriksson and colleagues (2009) found significant correlations between age and sense of support from God (r = .38), support from their organization (r = .36), and personal accomplishment (r = .29). They also found negative correlations between age and emotional exhaustion (r = -.38) and depersonalization (r = -.39). The majority of the participants in the current study were students at an undergraduate college between the ages of 18 and 24, and so would be at an age when they might not have learned the same coping skills as older adults. Older adults would have had more life experiences and presumably could have overcome many difficult situations. Young adults may be unable to see beyond current situations due to this lack of experience. At the same time, young adults are in a period of life when they are actively forming their identities. Older adults, by contrast, have formed much of their identities throughout life which may give them added emotional stability.

Results did not show any significant relationships between religiosity and any of the variables measures, possibly due to the lack of sensitivity of the measure. Religiosity was measured using a 3-item scale, but religiosity is a complicated variable. It may have been more precise to use a longer religiosity scale, but it was kept short in order to limit the length of the study. Subsequent studies should utilize longer religiosity scales in order to investigate the relationship between precise beliefs and trauma, self-forgiveness, and religious coping.

Because most of the participants in this study did not have PTSD, these results cannot be generalized to those with PTSD. Further research is necessary to determine how religious coping and PTSD impact self-forgiveness. The impact may differ depending on the type of trauma experienced (e.g. sexual abuse, military trauma, automobile accidents). The fact that the current results were obtained using a subclinical population, however, emphasizes the enormous effect that trauma has on self-forgiveness.

The current study did have some design weaknesses. Because the study was conducted online, it was not possible to monitor how long each participant spent writing the essay. Perhaps the effect of the condition would have been more pronounced with an in-person study. Subsequent studies should replicate the present study in a paper format with a more strictly timed essay-writing condition. It is impressive that there was such a strong, consistent effect of the treatment condition considering the writing time was not strictly monitored.

Remarkably, self-forgiveness for an unrelated, everyday event varied depending on the level of trauma a person experienced, even though the events were unrelated to the participants' traumatic experiences. This may suggest a widespread effect of trauma on a person's life, such that it affects self-forgiveness in all areas. According to this principle, a person who has experienced trauma may have difficulty forgiving his/herself in all life domains, not just in relation to guilt about the trauma itself. Although it would be difficult to assess how trauma exposure affects self-forgiveness for trauma-related offenses, the effect could be magnified. Presumably, if trauma has such a broad effect on self-forgiveness that it impacts everyday situations, then it would have an even greater effect on trauma-related situations. With careful ethical precautions, this hypothesis could be explored in further research. Most studies

investigating the relationship between trauma and self-forgiveness measure self-forgiveness as a personality trait. More study is needed to determine trauma's effect on self-forgiveness for a particular situation.

The present study investigated the impact of self-forgiveness, not other-forgiveness, primarily to protect study participants from pressure to forgive perpetrators. Since these are distinct constructs, it cannot be assumed that trauma exposure has the same effects on other-forgiveness. For the same reasons, the effect of religious coping in this study cannot be generalized to other-forgiveness. It would be interesting to explore how positive religious coping affects self-forgiveness in those who have not been exposed to significant traumatic events. Possibly, the effect could be similar to the effect of benefit-finding, which has been shown to increase other-forgiveness.

It is possible that the interaction between trauma level and positive religious coping could have been caused by other variables such as guilt or reactance. Further study is necessary to determine if an experimental manipulation of positive religious coping will lead to more self-forgiveness in those without PTSD and those with PTSD. The current study was conducted on an evangelical Christian college campus, and so social desirability bias could have made participants feel guilty when presented with the positive religious coping prompt. For example, the students could have felt that they should be praying about a situation even if they had no desire to pray. This might have made them feel guilty, and could have resulted in lower self-forgiveness scores. For this reason, results from the present study may not be replicated on secular campuses. Further research is necessary to confirm these findings.

If indeed the act of answering questions designed to elicit positive religious coping causes less self-forgiveness, this could be valuable information for counselors and clinicians who work with traumatized populations. It could be that directly asking a victim to use positive religious coping methods may need to be a carefully designed intervention. If the intervention is too direct, or too forceful, it may lead people who have experienced trauma to blame themselves more for their mistakes instead of less. More research is necessary to further explore religious coping interventions, especially those designed for people who have been traumatized.

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