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HOW DOES FORGIVENESS WORK TO IMPROVE MENTAL HEALTH?

by

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A Thesis
Submitted to the Faculty of Graduate Studies and Research
through Psychology
in Partial Fulfillment of the Requirements for
the Degree of Master of Arts at the
University of Windsor

Windsor, Ontario, Canada

2005

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How does forgiveness work to improve mental health?

ABSTRACT

Many people are consumed with anger, depression, and/or anxiety as a result of harboring feelings of resentment towards an individual who has offended them. Refusing to forgive holds deleterious mental health consequences for the victim; however, forgiveness yields reductions in anger, depression, and anxiety. But, little is known regarding how forgiveness works to improve mental health. Rumination, repetitive and intrusive thoughts about the offense or emotions elicited by the offense, may exacerbate and maintain the negative emotions educed by the offense. Consequently, this study evaluated rumination as a mediator between forgiveness and mental health, hypothesizing that forgiveness works to improve mental health through first eliminating rumination. The results of this study support the conclusion that one mechanism through which forgiveness works to improve mental health is through first reducing rumination. Specifically, interpersonal rumination, ruminating on future interpersonal failure, was found to mediate the relationship between forgiveness and anger, depression, and anxiety. However, forgiveness was also found to hold a direct effect on mental health. Forgiveness predicts decreases in anger, depression, and anxiety over and above the effect of interpersonal rumination.

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INTRODUCTION

Interpersonal Anger and Anxiety: A Devastating Problem

Anger and anger-related aggression can arise from a perception of being demeaned or being dealt an injustice. Provocations such as these have contributed to newspaper headlines detailing the horrors of school shootings, workplace violence, and road rage. Anger-fueled aggressive driving now equals alcohol impaired driving in terms of the number of consequent vehicle accidents, injuries, and fatalities (Galovski & Blanchard, 2004). Retail workers are victims of customer verbal aggression on average 10 times per day (Grandey, Dickter, & Sin, 2004). Anger can be a healthy, normal, and an adaptive response (Lazarus, 1991). However, it is obvious that, when poorly handled, anger can lead to numerous social, emotional, and physical problems.

Many individuals may respond to an offense with anger; however, other potential emotional reactions may result following a perception of being demeaned or being dealt an injustice. For example, an interpersonal altercation may elicit fear in the victim. The 'fight versus flight' theory states that in the moment of an offense the victim will either feel a desire to aggress against their offender, which is motivated by anger, or a desire to leave the situation, which is driven by fear (Selye, 1936). When an interpersonal altercation is perceived as threatening versus offensive, the predominant emotional response is likely to be fear (Worthington &Wade, 1999). Under these circumstances, avoidance of the offender would be the most likely behavioral manifestation. Contrary to

anger, the immediate deleterious effects of the victim's fear may not be evident; nonetheless, the result will be equally harmful to the victim.

If these methods of responding to interpersonal offenses become entrenched patterns of responding, the anger or the fear will accumulate and exacerbate. Or, if these immediate emotional reactions are not appropriately addressed, the anger or fear will intensify. Both pathways may result in adverse mental and psychological effects, as for example: chronic levels of anger, anxiety, or depression. Depression may develop insidiously, when anxious states are prolonged, under the guise of ongoing anxiety symptoms (Wheatley, 1997).

Refusing to forgive following an interpersonal offense is one potential factor that hinders an individual's ability to appropriately address her anger or fear, which was triggered by the offense. Harboring feelings of resentment and hatred toward an individual following an interpersonal altercation may maintain and exacerbate the victim's anger, whereas, dwelling on the motivation to avoid the offender may maintain and exacerbate the victim's anxiety. In addition to refusing to forgive specific transgressions, a general tendency to deny forgiveness following interpersonal offenses has both deleterious medical and mental health consequences. Many individuals refuse to forgive because they feel they have a right to hold a grudge, believing they deserve to be allowed to nurture their bitterness. However, when people choose to cling to long standing grievances following an interpersonal altercation, they allow unresolved anger to fester, which depletes their emotional reserves and this has been empirically linked to emotional and physical illness.

The Medical Health Consequences of Denying Forgiveness

Refusing to forgive can have negative long term physical health effects. For example, Witvliet, Ludwig, & Vander Laan, (2001) found that anger, elicited through imagining holding a grudge toward an offender, resulted in significantly greater facial tension in the corragator (brow) muscle region compared to controls who imagined forgiving the offender. Furthermore, Witvliet et al. (2001) found that refusing to forgive perpetuates high levels of anger which heightens SNS arousal and cardiovascular reactivity (Witvliet, et al., 2001). Other studies have consistently demonstrated that trait anger is correlated with increased heart rate and both elevated systolic and diastolic blood pressure (Sinha, Lovallo, & Parsons, 1992). In addition, research has shown that anger expression is strongly correlated with the aggregation of platelets (Wenneberg, et al., 1997). Continual SNS arousal, high blood pressure, elevated heart rate, and the aggregation of platelets are all risk factors for heart disease. Consequently, it is not surprising that chronic anger has been linked to cardiovascular disease, and coronary heart disease (Faber & Burns, 1996; Muller, Rau, Brody, Elbert & Heinel, 1995). Further, refusing to forgive is correlated with anginal chest discomfort (Ketterer et al., 2004). Therefore, the conclusion can be made that an enduring refusal to forgive, which can lead to anger, generates physiological vulnerabilities and/or intensifies existing problems which leads to decreases in physical health.

Denying forgiveness also negatively impacts on physical health through increasing interpersonal stress. Berry and Worthington (2001) found that when participants were asked to imagine critical moments in their marital relationships those who had unforgiving personality styles reflected on unhappy relationship moments and

had elevated cortisol production.   The increase in cortisol production suggests an acute stress reaction. Interpersonal stress had been found to negatively impact the biological systems including the immune, nervous, cardiovascular, and metabolic systems (McEwen, 1998).

The Mental Health Consequences of Denying Forgiveness

Not only is refusing to forgive detrimental to one's physical health, but refusing to forgive is also detrimental to one's mental health. Anger, a main consequence of unforgiveness, has serious harmful consequences both when internalized, which leads to depression and anxiety (Duarte & Thompson, 1999; Gratch, Bassett, & Attra, 1995), and when externalized, through aggression. Further, negative outward expressions of anger have been correlated with suicide (Van Elderen, Verkes, Arkesteijn, & Komproe, 1996). In general, anger, resulting from a refusal to forgive, is correlated with higher levels of psychopathology for the victim (Maltby, Macaskill, & Day, 2001).

In addition to elevated levels of anger, failure to forgive others is positively correlated with social introversion, social dysfunction, and psychoticism (Maltby, et al., 2001). Additionally, an examination of coping strategies in a group of adults who had experienced the unnatural death of a loved one revealed that those who harbored thoughts of revenge reported statistically significantly lower scores on a single-item measure of adjustment than those who had forgiven (Weinberg, 1994). Evidently, refusing to forgive is harmful to an individual's mental health.

Promoting Adaptive Functioning Through Inculcating Forgiveness

As unforgiveness results in poor physical and mental health, there is a need to inculcate forgiveness. Although a standard agreed upon definition for forgiveness does

not currently exist in the literature, most researchers agree that forgiveness is a change in the victim's cognitive, emotional, and behavioral reactions to the perpetrator from negative to more positive. Previous research has found that forgiveness can reverse the negative physical and emotional consequences of holding a grudge.

Forgiving people enjoy healthier lives, suffering from fewer illnesses and diseases (Seybold, Hill, Neumann, & Chi, 2001). For example, the reduction in hostility that follows forgiveness is associated with a reduction in coronary problems (Kaplan, 1992). In addition, forgiveness has been found to lead to a reduction in the risk factors associated with cardiovascular problems, as those with a disposition to forgive were found to have lower indices of blood viscosity (Seybold, et al., 2001). Furthermore, forgiveness is positively correlated with improvements in the immune system (McCullough et al., 1997; Worthington, 1998). Additionally, forgiveness interventions resulted in positive healing benefits for both cancer and AIDS patients (Phillips & Osborne, 1989). The research suggests exercising forgiveness in the face of an interpersonal offense is beneficial to one's physically health.

Not only is forgiveness beneficial to one's physical health, but also those who are more predisposed to extending forgiveness enjoy greater emotional health. Both correlational and intervention studies purport that forgiveness decreases the victim's levels of anger, anxiety, and depression (Lin, Mack, Enright, Krahn, & Baskin, 2004). Forgiveness has also been shown to increase the victim's self esteem (Coyle & Enright, 1997). Additionally, for decades clinical case studies have enumerated the psychological benefits of forgiveness, demonstrating that forgiveness leads to a reduction in anger, anxiety, and depression in clients (Hunter, 1978; Kaufman, 1984, Fitzgibbons, 1986).

Those who choose forgiveness experience greater emotional health in general. For example, Rye and Pargament (2002) found that forgiveness is positively correlated with existential well-being. Specifically, they found that 58 college women, who had been hurt by a romantic partner, demonstrated significant increases in overall well-being after undergoing a forgiveness intervention (Rye & Pargament, 2002). This increase in emotional well being was enduring as the beneficial effects were still observed at a six week follow-up. Further, Poloma and Gallup (1991) found that individuals who reported a general tendency to forgive when confronted with an interpersonal offense scored higher than controls on a single-item measure of life satisfaction. Providing further evidence that forgiveness is associated with greater emotional health is a study of 83 adolescent and adult refugees who had endured the trauma of war (Peddle, 2001). Peddle (2001) found forgiveness was significantly correlated with trauma recovery and resiliency. In contrast to harboring a grudge, forgiveness holds many positive emotional consequences for the victim. Consistently, the forgiveness literature suggests that forgiveness is correlated with overall well being and higher life satisfaction as well as correlated with decreases in anger, depression, and anxiety.

Summary and Conclusions

Forgiveness has the potential to reverse the negative emotional consequences of holding a grudge. As a result, it would be beneficial to promote forgiveness as an adaptive way for dealing with interpersonal offenses because in addition to major grievances, everyday life is an accumulation of minor offenses, irritations, and injustices. People unintentionally make mistakes that hurt others physically or emotionally. Others volitionally act with malice, which can lead to elevated anger, hostility, and aggression or

elevated anxiety and depression. Without forgiveness the negative emotions that follow an offense would accumulate and negatively impact the victim.

Popular Misconceptions about Forgiveness

The majority of clinicians and researchers regard forgiveness as a character strength; however, others conceive forgiveness to be a weakness (for review see Thompson, et al., in press). Opponents of forgiveness believe it leaves the victim vulnerable and susceptible to further victimization (Katz, Street, & Arias, 1997). Other researchers contest forgiveness interventions that encourage victims to forgive their perpetrators, suggesting that this is equivalent to victim blaming (Bass & Davis, 1988). The disparities of opinion between the advocates and opponents of forgiveness can be explained based on differences in how forgiveness is defined. For example, Enright (1996) found that authors who discouraged children from forgiving their abusive parents confused forgiveness with pseudo forgiveness. Pseudo forgiveness is the verbalization of forgiveness while still harboring bitterness in one's heart. Researchers who worry that forgiveness is detrimental to the victim most likely have a misguided idea of what comprises forgiveness. In fact, there are several thought patterns and actions that are not part of forgiveness and if enacted would lead to negative emotional ramifications and possible danger to the victim's physical safety.

Forgiveness is Not Forgetting

Forgiveness involves actively taking the control of one's life back from the offender. It is not a passive act of allowing angry bitter feelings to dissipate with time (Enright, 1991). In other words, it does not involve forgetting the offense occurred without ever

dealing with the event (McCullough, Pargament, Thoresen, 2000). The memory of the offense does not simply fade out of conscious awareness. In fact, deep offenses are rarely erased completely from the victim's mind (Enright, 1991).

Forgiveness is Not Denial

Secondly, forgiveness is not denial. That is to say forgiveness is not the victim's refusal to acknowledge that an offense has occurred. Nor is it a reluctance to perceive that the event was painful and harmful (McCullough, et al., 2000). In true forgiveness, the victim must first acknowledge the pain the offender has caused them, and then take action to repair the damage.

Forgiveness is Not Excusing

Thirdly, forgiveness does not excuse the perpetrator's actions. By excusing the offender's behavior it suggests that the offender had a legitimate reason for committing the offense (McCullough, et al., 2000). Forgiveness does not involve conceding that the perpetrator should not face the consequences of his/her actions because of a good excuse. Neither does forgiveness imply that the victim condones the perpetrator's actions. Condoning indicates that the perpetrator's offense was justified. Independent of the circumstances surrounding the offense, forgiveness does not entail conceding that the perpetrator's response was warranted.

Forgiveness is Not Pardoning

Forgiveness should not be equated to pardoning. Forgiveness in no way suggests a legal pardoning of the perpetrator's actions. The victim can and in some circumstances should demand legal justice for the offense, while still forgiving the offender. For example, a woman frequently beaten by her husband can and should work toward legal

prosecution of her husband. However, this woman at the same time may have undergone the forgiveness experience. She may have experienced an internal release of angry and bitter thoughts, negative feelings, and vengeful behaviors toward her husband, but concurrently demand jail time for her husband. In this case, the pursuit of legal punishment for her husband is not motivated by vengeance, but by a need for physical protection. The victim's extension of forgiveness to the perpetrator is not associated with the perpetrator's court judgment.

Forgiveness is Not Reconciliation

Forgiveness is not synonymous with reconciliation. Reconciliation involves restoration of the relationship between the offender and the victim. Forgiveness is an intrapersonal internal release of negative thoughts and emotions; whereas, reconciliation is an interpersonal rebuilding of a previous relationship (Enright, 1991). Not only is reconciliation not necessary for forgiveness, but also it may be hazardous and unwarranted. Specifically, in cases where the perpetrator endangered the victim's personal safety (i.e. physical or sexual abuse) reconciliation may be foolhardy and dangerous. Furthermore, if the perpetrator is not repentant reconciliation may simply place the victim in a position to be victimized again. In some cases (i.e. marital therapy) reconciliation may be possible and even beneficial. However, reconciliation is separate from forgiveness. Forgiveness is an internal intrapersonal event. Reconciliation in contrast is interpersonal and dependent on the nature of the other's wishes. Reconciliation does not have to occur in order for the forgiveness process to be completed.

Summary and Conclusion

In summation, excusing, condoning, and pardoning all suggest that the perpetrator had the right to do what he/she did and should not be held responsible. Any of those responses would leave the victim with smoldering resentment (Enright, 1991). This would be pseudo forgiveness, an outward expression of forgiveness lacking an inward expression. Forgiveness is more than lip service (i.e. "I forgive you"). If underlying anger and resentment are present then true forgiveness has not taken place (Enright, 1991). Whereas excusing, condoning, and forgetting deny the growing resentment, forgiveness overcomes it with empathy and compassion (Enright, 1991). Instead of putting up with injustice, forgiveness involves letting go of negative thoughts, feelings, and actions directed toward the perpetrator despite the presence of moral injury (Enright, 1991).

Separating forgiveness from the aforementioned processes, especially reconciliation, allows individuals to forgive without compromising their physical or emotional safety. Further, distinguishing forgiveness from forgetting, pardoning, excusing, and denying, permits individuals to pursue forgiveness without denying their right to pursue social justice. With these distinctions firmly established, forgiveness appears to be an adaptive and psychologically healthy response to an offense. As forgiveness is intrapersonal, an internal and personal change in attitudes, thoughts, behaviors, and feelings toward the offender, forgiveness is more for the benefit of the victim than for the benefit of the offender. The victim derives the positive consequences of forgiveness.

Forgiveness

Historical Background

Traditionally, forgiveness has been relegated as a religious concern, a theological construct not a topic for empirical study by behavioral scientists. However, relatively recently, forgiveness has gained credence as a topic worthy of scientific study (McCullough, 2000; McCullough, et al., 2000a, Worthington & Wade, 1999). Historically, forgiveness served solely as a topic for philosophical speculation and theological examination (Enright, Gassin, & Wu, 1992; McCullough, et al., 1997). Many world religions have boasted forgiveness as essential for emotional and spiritual health, believing that forgiveness can produce peace in a hostile world. Both Judaism and Christianity view forgiveness as the pinnacle of their faith, believing that God forgives people of their sins to the extent that people with grudges forgive those who trespass against them (McCullough, et al., 1997; Dorff, 1998; Jones, 1995). Not only do Judaism and Christianity place a high spiritual importance on forgiveness, but also exercising forgiveness is deemed essential to spiritual health in many other major religions as well (i.e. Islam and Hinduism) (Rye, et al., 2000). Essentially, in most world religions without interpersonal forgiveness there is no remuneration of sins.

Historically, forgiveness was associated with religion as a means of eliminating the need for revenge for social injustices thereby promoting peace and harmony. However, Gartner (1992) pointed to the need for forgiveness to be considered a legitimate and vital research goal for psychologists. For a number of complex reasons that are beyond the scope of this introduction, the behavioral sciences have witnessed a recent flurry of psychological research on forgiveness. This surge of empirical interest

has enumerated forgiveness as a viable topic for clinical psychology, social psychology, and neuropsychology. (McCullough, 2000; McCullough, et al., 2000; Worthington & Wade, 1999).

The knowledge-base derived from this research suggests that whether one is Christian, Muslim, Buddhist, Hindu, atheist, agnostic, or other, forgiveness has pragmatic implications for inculcating improved emotional and physical health. For example, as noted earlier, forgiveness has been found to reduce anxiety, depression, and chronic anger as well as increase self esteem (Seybold, et al., 2001). Evidently, forgiveness yields profound beneficial emotional consequences, making the study of forgiveness an essential psychological topic. Furthermore, psychologists are applying forgiveness to their clinical practice encouraging angry clients to forgive their offenders in order to facilitate the client's emotional healing.

Summary and Conclusion

In summation, although the roots of forgiveness lie in religious and philosophical study, no longer is the study of forgiveness relegated to pastoral investigation and philosophical speculation. Forgiveness can be a legitimate construct for empirical psychological research. Additionally, forgiveness is an essential topic for psychological investigation as previous research has illuminated the positive emotional and physical health benefits of a lifestyle of forgiveness.

Types of Forgiveness

Forgiveness involves a victim releasing negative thoughts, feelings, or behaviors in exchange for neutral or positive thoughts toward the offender. A victim is defined as an individual who has endured suffering or a wrongdoing, whereas, the perpetrator is an

individual who engages in an immoral and harmful act toward another person (Exline & Baumeister, 2000). Delimiting who comprises the victim and perpetrator roles is essential, as the construct of forgiveness can be vastly encompassing. The present study is concerned with the bestowing of interpersonal forgiveness (e.g., victim forgives perpetrator)

However, forgiveness can be studied from other levels of analyses. For instance, theologians have studied divine forgiveness of people's sins. Also, moral philosophers have studied societal-level forgiveness (e.g. Jews forgiving the WWII Nazis). For most psychologists, forgiveness is studied in the context of dyadic relationships. Thus, it is necessary to establish at the outset that this paper will be examining the offering of forgiveness from the victim to the offender. Although repentant perpetrators will sometimes seek forgiveness from persons they have offended, this type of forgiveness is beyond the scope of the present study. Bestowing forgiveness can be broken down based on the object of forgiveness (i.e. God, situations, self, or others).

From famine, disease, to child poverty, clearly, there are many reasons why people would be angry at God and feel unforgiving. For example, a woman dying of cancer may blame God for her illness. Those who choose not to believe in God might blame fate or focus their anger at the disease/situation. Any situation that violates a person's life assumptions can lead to anger and the consequent formation of a grudge. As a result, forgiveness of both God and situations has been empirically evaluated. For example, Exline, Yali, and Lobel (1999) found that extending forgiveness to God leads to a decrease in anxiety and depression even after accounting for the variance of forgiving self and others. Forgiveness is also examined in terms of forgiving oneself. Self

forgiveness examines the extent to which individuals are willing to let go of the anger they direct toward themselves for past mistakes and failures. Neither of these types of forgiveness will be addressed in this paper.

Most of the forgiveness research addresses interpersonal forgiveness. McCullough, Hoyt, & Rachal (2000) demarcated interpersonal forgiveness into three categories (i.e. offense specific, dyadic, and dispositional). Offense specific forgiveness occurs when the victim forgives an offender for a specific transgression. Dyadic forgiveness is where the victim forgives a single offender for a history of transgressions. Dispositional forgiveness examines a person's generalized ability to forgive different people for different transgressions. Previous research has found that individuals who have high dispositional forgiveness are better able to modulate their emotions leading to better anger management (Emmons, 2000a). Further, they have more harmonious relationships, are more compassionate, and demonstrate more empathy than people low in dispositional forgiveness (Emmons, 2000a). Consequently, the focus of this paper will be on dispositional interpersonal forgiveness. In other words, this paper will examine the consequences of an individual's general tendency to extend or withhold forgiveness.

Conceptual Models of Interpersonal Forgiveness

Controversy and Confusion

It has been said that relinquishing bitterness and choosing to forgive is both people's greatest need and highest achievement. But, what defines forgiveness? As aforementioned, a single agreed upon definition of forgiveness does not exist in the literature (Worthington, 1998a). Conceptualizations of forgiveness differ markedly

between researchers. Despite the differences, most would agree that forgiveness is an adaptive response (e.g. Freedman & Enright, 1996; McCullough, 2000; Thompson, et al., in press). The majority would concede that forgiveness is an effective method of coping that leads to better overall psychological well-being (Pargament & Rye, 1998). In addition, there is a consensus that interpersonal forgiveness occurs when an individual personalizes another's actions and perceives these actions to be noxious, unfair, and harmful (Hebl & Enright, 1993). The victim experiences a hurt, which conjures up resentment toward the offender. In the absence of a wound (i.e. emotional, physical, etc.), the concept of forgiveness becomes meaningless and irrelevant. Being the recipient of harm is a necessary component of the forgiveness response. Forgiveness occurs when the victim foregoes resentment and bitterness and replaces it with and an incompatible response. This forgiving response may emerge despite the fact that the victim has no obligation to forgive or despite the fact that forgiveness might not be "deserved" or "merited".

In terms of the differences in definitions between researchers, essentially the researchers differ in whether they focus on the emotional, motivational, cognitive, or behavioral aspects of forgiveness. However, all researchers agree that in forgiveness a negative response is changed from negative to neutral or positive.

Enright's Model

Enright defines forgiveness as "a willingness to abandon one's right to resentment, negative judgment, and indifferent behavior toward one who unjustly hurt us while fostering the undeserved qualities of compassion, generosity, and even love toward him or her" (Enright & Coyle, 1998, pp. 46-47). This definition emphasizes both

empathy, emotional identification with the offender, and compassion, the readiness to share the burden of pain the offender has undergone (Enright, Longinovic, & Loudon, 1994). Enright claims that developing emotional identification with the offender and fostering a willingness to show compassion compel the victim to forego his or her right to negative thoughts, feelings and retaliatory actions (Enright et al., 1994). These unforgiving and hostile responses are abandoned despite the victim's legitimate right to feel bitter and resentful. Instead, according to Enright, the victim who forgives chooses to view the offender with good will, consequently, achieving forgiveness (Enright & the Human Development Study Group, 1991).

Enright posits that when forgiveness takes place alterations occur to the affective, cognitive, and behavioral systems (Enright, 1991). In terms of the affective system, negative emotions (i.e. anger, bitterness, sadness) are replaced by neutral emotions. Over time the neutral emotions are exchanged with positive affect (i.e. agape). In the cognitive system, judgmental thoughts and conspiracies of revenge are abandoned in exchange for kind thoughts, desiring good things to happen to the offender. In terms of the behavioral system, revenge activities are replaced by kind overtures such as the willingness to reconcile. However, reconciliation depends on a true change in the offender.

The essential component of Enright's forgiveness model is that he conceptualizes forgiveness as a process. Forgiveness is not an isolated one time verbal expression of forgiveness. Instead, forgiveness occurs over a period of time following various stages. In fact, Enright divides forgiveness into 20 units. Forgiveness unfolds with time comparable to the grieving process, requiring time and the experience of different emotions before the victim is able to let go of the pain. Enright conceptualizes

forgiveness as a developmental process with the victim going through various stages before experiencing true forgiveness.

Worthington's Model

In contrast to Enright's model, Worthington posits that both empathy and humility are required in order for true forgiveness to take place (Worthington, 1998). In agreement with Enright's model, Worthington states that both cognitive and affective empathy are critical components in the forgiveness process. However, Worthington argues that empathy triggers the forgiveness process, but is not sufficient to complete the act of forgiveness. For example, a person may cognitively adopt the offender's perspective and emotionally feel for the offender (i.e. cognitive and affective empathy), yet still believe the offender is wicked and undeserving of forgiveness. Therefore, forgiveness would not result even though empathy is high.

Worthington claims humility is the essential component that turns high levels of empathy into a forgiving response (Worthington, 1998). Humility involves a quality of self-awareness in which one recognizes one's own weakness and flaws in character. Unlike the shame-based person or the arrogant egotist, the humble person has a more realistic appreciation of her own liabilities and assets. Because she knows she too makes mistakes in judgment, she is presumed to more easily empathize with perpetrators of harm. Thus, when in receipt of an interpersonal offence, the quality of humility is believed to make compassion more likely and forgiveness that much easier. Further, due to the quality of sympathy and empathy, the humble victim is better able to recall times when she transgressed and wished others would bestow forgiveness on her. Having

needed mercy from others in the past, the humble victim is more ready or willing to extend mercy and respond to hurt by exhibiting a prosocial forgiveness response.

The final step in Worthington's forgiveness model is a behavioral component. To finalize the forgiveness process the victim must commit an action denoting forgiveness. This overt behavior ranges from the private act of crying, to a public declaration of forgiveness, from asserting forgiveness to a counselor, to avowing forgiveness to the offender. In summation, Worthington defines forgiveness as "initiated by empathy for the offender, furthered by humility in the person who was hurt, and solidified through making a public commitment to forgiveness" (Worthington, 1998, p. 63).

McCullough's Model

McCullough and colleagues see forgiveness in motivational terms (McCullough et al., 1997, 1998). They define forgiveness as a prosocial change in the victim's motivations toward the offender (McCullough et al., 1997). Although these motivational changes may result in the cognitive, affective, and behavioral changes key to Enright and Worthington's models, these changes are consequences of the underlying motivational shift not components of the process itself. The main emphasis in McCullough's model is on motivations.

According to this model, the forgiveness process begins when an individual perceives another's actions to be noxious (McCullough, 2000). This evokes a motivation within victims to either attack or seek to avoid the person who has threatened them. Attack behaviors involve revenge and retaliation. Attack can be an immediate defensive assault or it could consist of future plans for retribution. In terms of avoidance, these behaviors range from a temporary break in contact with the offender to a long term

dissolution of the relationship. In both cases, it is clear that unforgiving responses are destructive to the quality of the relationship and to the maintenance of interpersonal harmony. As an incompatible response to aggression or avoidance, forgiveness supercedes to displace these two motivations. Therefore, according to this model, when a person forgives, they alter their motivations. No longer does the victim seek revenge or attempt to avoid the perpetrator; instead the offended party is filled with either neutral or positive motivations towards the transgressor. In summation, McCullough defines forgiveness exclusively by motivational change.

Summary and Conclusions

Although there is a lack of consensus in the theoretical definition of forgiveness, the definitions in existence share many common elements. They all imply that forgiveness involves a prosocial change in the victim's dealings with the transgressor (McCullough, et al., 2000). Forgiveness requires the victim's response to the offender to become more positive and less negative. Furthermore, they suggest that forgiveness is mainly intrapersonal (Standard, Thoresen, Harris, Benisovich, & Luskin, 2001). In other words, forgiveness is not conditional on the perpetrator's behavior. Forgiveness is possible regardless of what the offender desires, as it is an internal release of negative feelings, thoughts, and actions on the part of the victim.

Most researchers agree that forgiveness involves a prosocial change in the victim's conceptualization of the transgressor and the offense. Additionally, all agree that as a consequence of forgiveness the victim will gain peace of mind, physical calmness, and an overall increase in well being. An amalgamation of prior definitions would conceptualize forgiveness as a process in which the victim changes their responses

to the offender in terms of how the victim thinks, feels, and behaves toward the offender from negative to neutral or positive. This definition represents an offense specific forgiveness; however, in this study, forgiveness is examined as a personality trait. Therefore, forgiveness is defined as a general tendency to respond to an offense by releasing negative emotions, thoughts, and actions toward the offender and replacing them with neutral or positive emotions, thoughts, and actions.

The Consequential Benefits of Forgiveness

As aforementioned, forgiveness holds emotional benefits for the victim; whereas, clinging to a grudge serves only to add to the continual suffering of the victim. There is ample support for this finding from correlational research and intervention studies. These results consistently illustrate that forgiveness predicts reductions in anger, depression, and anxiety. For example, there is strong correlational evidence indicating a relationship between forgiveness and reductions in both situation-specific anger (i.e. state anger) and general level of anger (i.e. trait anger) (Seybold, et al., 2001). Specifically, in a sample of predominately male middle aged adults, forgiveness was found to be negatively correlated to multiple assessments of state and trait anger (Seybold, et al., 2001). The results led the researchers to conclude that more forgiving individuals are less angry and are better able to control their anger. Tangney, Fee, Reinsmith, Boone, and Lee (1999) found that both self reports and clinician's ratings of anger and passive aggressive behavior were negatively correlated with the tendency to forgive. Further, allowing anger from an interpersonal offense to fester has been linked with decreased mental health (Jang & Johnson, 2003). In a study where participants were asked to imagine

responding to one of their real life offenders through either rehearsing the hurt and bearing a grudge or demonstrating forgiveness, those who responded by rehearsing the hurt and holding a grudge were more angry (vanOyen-Witvliet, 2001). Further, forgiveness is a strong predictor of level of anger (Thompson et al., in press). In other words, it has been found that those individuals who rank high in forgiveness would have low levels of trait anger.

Evidently, forgiveness and anger are linked statistically with the presumed relationship that forgiveness is contributing to reductions in anger. The reverse could also be true. Less angry people may find it easier to forgive because they are less angry, and therefore have less to forgive. However, the results from forgiveness intervention studies support the former relationship that forgiveness results in decreases in anger. For example, Coyle and Enright (1997) found a reduction in mean state anger levels following a forgiveness intervention for men who were upset regarding their wives' decision to have an abortion. Following a forgiveness intervention for adult children of alcoholics, the forgiveness intervention group had a significant reduction in trait anger compared to the controls who had received an intervention teaching conflict resolution skills (Osterndorf, 2000). College students who were hurt by their romantic partner also demonstrated reductions in anger after participating in a forgiveness intervention (Rye & Pargament, 2002). Lending further support for the post forgiveness intervention reduction in trait anger, are the results from a forgiveness intervention for adult alcohol and other drug abusers (Lin, 2002). Another forgiveness intervention study examined dying individuals, who were plagued by unresolved interpersonal wounds (Hansen,

2002). The results indicated a significantly greater reduction in anger from pretest to posttest compared to controls (Hansen, 2002).

Furthermore, there is preliminary evidence suggesting that forgiveness interventions lead to reductions in anger cross culturally as well. Park (2003) found a greater reduction in regulating anger and aggression following a forgiveness intervention in Korean females who had suffered aggressive attacks compared to controls. Lin, (1998) tested a forgiveness intervention on college students from Taiwan, who were rated as insecurely attached to their parents. These students underwent therapy to forgive their parents. The results of the intervention indicate a significantly greater decrease in trait anger for the experimental group (Lin, 1998).

As with anger there is abundant correlational support for the association between forgiveness and reductions in depression. Trait forgiveness, the general tendency to forgive, has been found to be negatively correlated with depression (Seybold, et al., 2001). Additionally, a nationwide survey of the elderly revealed that those who had lived their lives with the propensity to forgive enjoyed a greater sense of psychological well being, suffered from fewer symptoms associated with depressed affect, and fewer somatic symptoms of depression (Krause & Ellison, 2003). Further, research links forgiveness with reductions in clinical depression and depressive symptomatology. For example, Brown (2003) found that individuals' scores on a brief measure of dispositional forgiveness were negatively correlated with scores on a measure of self reported depression symptoms. Mauger et al. (1992) reported that peoples' MMPI depression subtest scores were negatively correlated with their tendency to forgive others. The results of a cross sectional survey of divorced or permanently separated mothers (children

aged 10 – 13 years old) lends further support to the relationship between decreased

depression and forgiveness (Aschleman, 1996). Specifically, the extent to which the

mother had forgiven the child's father for the hurt he had caused her was found to be

negatively correlated with the number of depressive symptoms. In a study examining the

physiological and psychological correlates of forgiveness, depression was found to be

negatively correlated with forgiveness (Seybold, et al., 2001). As with anger, there is a

substantial body of research supporting the link between forgiveness and low levels of

depression with the presumed relationship being forgiveness reduces depression. But, the

reverse could be true with those less likely to experience depressed affect being more

likely to forgive. However, the results from forgiveness interventions indicate that

forgiveness reduces depression.

In numerous cases when forgiveness towards a specific offender was taught and

put into practice the participants experienced a decrease in their overall level of depressed

affect, trait depression. For example, male and female students who viewed their

childhoods as parentally love deprived underwent a group forgiveness intervention with

the goal to encourage the students to forgive their parents. The follow up revealed those

who forgave their parents had an accompanying decrease in their trait depression (Al-

Mabuk, Enright, & Cardis, 1995). Further, another forgiveness intervention with elderly

females focused on helping them learn to forgive one person who had seriously wounded

them emotionally (Heble, & Enright, 1993). The results of this study indicated that the

elderly women who received the forgiveness intervention had significantly lower

psychological depression scores from pretest to posttest compared to controls. Adult

children of alcoholics also experienced a greater decrease in depression following a

forgiveness intervention compared to controls who did not have the forgiveness intervention (Osterndorf, 2000). Further, adult alcohol and drug abusers demonstrated a greater decrease in depression than controls following a forgiveness intervention (Lin, 2002). Even in populations with a justified cause to be enraged and consumed with bitterness, those individuals who chose to forgive their offenders had lower levels of trait depression. Specifically, a forgiveness intervention with incest survivors revealed a significant reduction in psychological depression following the intervention compared to controls (Freedman & Enright, 1996). Research supports a link between forgiveness and reductions in anger and depression. This is also true of the relationship between forgiveness and anxiety.

Individuals with a propensity to forgive differ from those who are grudge prone in that they are less anxious overall (McCullough & Witvliet, 2002). A cross sectional examination of divorced or permanently separated mothers also provides support for the negative relationship between forgiveness and anxiety (Aschleman, 1996). Specifically, they found that the extent to which the mother had forgiven the father was positively correlated with her number of anxious symptoms (Aschleman, 1996). Forgiveness is highly negatively correlated with both state and trait anxiety (Seybold, et al., 2001). Although this research is correlational, inhibiting the prediction of the direction of the relationship, the results from forgiveness intervention studies suggest that forgiveness predicts decreases in anxiety.

Numerous forgiveness interventions found a reduction in the level of anxiety in the experimental group compared to the controls. For example, a group of men whose wives had an abortion against their will measured above average on state anxiety before they

entered into forgiveness therapy (Coyle & Enright, 1997). However, following the forgiveness intervention the men tested in the average range for state anxiety (Coyle & Enright, 1997). A forgiveness intervention with female incest survivors resulted in short and long term decreases in anxiety as well (Freedman & Enright, 1996).

Several forgiveness interventions centered on children learning to forgive their parents, all of these were met with reductions in anxiety. For example, adolescents struggling with anxiety surrounding their parent's divorce experienced a significant reduction in anxiety following a forgiveness education intervention (Freedman & Knupp, 2003). Adult children of alcoholics who learned to forgive their parents measured lower in anxiety than those who bore grudges towards their alcoholic parents (Osterndorf, 2000) and children who were parentally love deprived also experienced significant reductions in anxiety when taught to forgive their parents (Al-Mabuk, et al., 1995). Even in another culture (i.e. Taiwan) insecurely attached adolescents demonstrated a decrease in anxiety following a forgiveness intervention teaching them to forgive their parents (Lin, 1998).

Furthermore, a study on elderly females who reported feeling substantially wounded by another found large reductions in anxiety following the forgiveness intervention (Heble & Enright, 1993). A forgiveness intervention provided to alcohol and drug abusers resulted in decreases in anxiety (Lin, 2002). Even individuals not suffering from substantial psychological pain experienced a reduction in anxiety after a forgiveness intervention that taught them to forgive someone in their lives who had caused them the most pain (Humphrey, 1999). Previous research suggests a relationship between forgiveness and decreases in anxiety.

Summary and Critique

In summation, a large body of correlational research and forgiveness intervention research has repeatedly demonstrated that forgiveness leads to decreases in anger, depression, and anxiety. The statistical link between forgiveness and decreases in negative emotions has been repeatedly demonstrated. However, few studies have attempted to explain this relationship. Past research fails to embed the results in explanatory theory. The empirical results are demarcated, yet no attempt is made to explain why the proposed cause results in negative consequences. This is problematic, as it is insufficient to know that forgiveness works to reduce the negative emotional health consequences of bearing a grudge. It is important to know how it works. In addition to adding to the greater knowledge base of forgiveness, knowing how forgiveness works to reduce negative emotional health outcomes of unforgiveness will lead to the construction of more effective forgiveness interventions. Further, this knowledge equips therapists to be better able to treat individuals suffering with anger, depression, and/or anxiety due to unforgiveness.

As previous work on forgiveness is void of a theoretical explanation for how forgiveness works, research is required to know how forgiveness reduces the negative emotional health consequences of bearing a grudge. This information is essential to forgiveness research and treatment. Consequently, the aim of this study is to explain why forgiveness leads to reductions in the negative emotional consequences of holding a grudge (i.e. forgiveness leads to reductions in anger, depression, and anxiety). Further, this study will attempt to situate past results within an explanatory theoretical framework.

Why Does Forgiveness Lead to Decreases in Anger, Depression, and Anxiety?

Upon experiencing an interpersonal offense, the victim is faced with a choice either to extend forgiveness or hold onto a grudge. The choice to cling to bitterness is referred to as unforgiveness, which is a state characterized by anger and other negative emotions. Anger is an emotional arousal which varies in intensity and duration (Spielberger, Reheiser, & Sydeman, 1995). It is typically evoked through a perception of being wronged by another (Kassinove & Sukholsky, 1995). Consequently, feelings of anger can be automatic following an interpersonal altercation, although the intensity and duration of the anger varies according to the severity of the offense and the victim's willingness to let go of anger. Extending forgiveness requires the release of anger. When individuals choose to forgive their offender they are making the decision to let go of their anger directed at that offender. Therefore, it follows that forgiveness results in decreases in anger, as the opposite of a forgiving response is essentially heightened anger. Not only is forgiveness the release of angry feelings, but also when choosing to forgive, the victim relinquishes her angry thoughts, and potential aggressive behaviors directed toward the offender.

As forgiveness involves the emotional release of anger, it would follow that the decreases in depression that accompany forgiveness may also be the result of decreased anger. Forgiveness may work to reduce depression through eliminating suppressed anger, which may manifest itself in the form of depression. Freud was the first to hypothesize that depression is anger that has been turned inward (Freud, 1917). And, psychoanalysts have long held the belief that the suppression of angry thoughts and feelings results in internalizing disorders (i.e. depression). Since then many researchers

have found a relationship between anger suppression and depression (e.g. Clay, Anderson, & Dixon, 1993; Thomas & Atakan, 1993). Individuals with high levels of anger-in feel angry and are consumed with angry thoughts, but suppress the outward expression of their anger (i.e. verbal expression or aggression) (Kuppens, Mechelen, Meulders, 2004). Individuals with elevated anger-in tend to brood and boil with anger covertly.

A cross sectional analysis of anger suppression revealed that depressed individuals have a greater tendency to turn anger inwards than a comparison group of non-depressed individuals (Riley, et al., 1989). Additionally, Allan and Gilbert, (2002) found the number of depressive symptoms was significantly positively correlated with anger-in. In a sample of CEOs, Begley (1994) found that anger-in predicted degree of depression, with those higher in anger suppression suffering from elevated levels of depressive symptoms. Further, internalized anger was found to predict depression in a sample of undergraduates (Bridewell & Chang, 1997).

In further support of depression being a consequence of anger suppression, women, more than men, tend to suppress their anger (Linden, et al., 2003) and more women than men suffer from internalizing disorders (i.e. depression) (Klose & Jacobi, 2004). Additionally, Thomas and Atakan (1993) found that women (35-55 years old) who had a greater tendency to suppress anger had higher scores on the Beck Depression Inventory. Evidently, there is empirical support for the relationship between anger suppression and elevated levels of depression.

In terms of forgiveness, if anger, resulting from daily interpersonal offenses, is not dealt with, it will grow and accumulate. If this anger is suppressed, it will grow and

accumulate and may eventually manifest in depression. Depressive symptoms may arise from holding in anger directed at the offender. However, when an individual learns to forgive the result is a release of anger. The release of anger would then lead to a secondary reduction in depression as the anger is no longer being exacerbated. Therefore, it makes theoretical sense that forgiving an offender decreases depression, as forgiveness eliminates the suppressed anger towards the offender.

As aforementioned, not everyone responds to an interpersonal altercation with anger and a desire to aggress against the offender. Many react to interpersonal offenses with fear and trepidation. In this case, refusing to forgive the offender would result in clinging to the fear and anxiety that accompanies the offense. When the primary deleterious emotion following an interpersonal altercation is anxiety, extending forgiveness would result in the release of the anxiety elicited by the offender. The victim would no longer harbor negative thoughts or feelings toward the offender; consequently, the memory of the offense and the accompanying emotions would no longer elicit anxiety. The victim's anxious feelings would dissipate, as the victim would no longer have cause to be anxious and afraid. Therefore, forgiveness frees the victim from the anxiety originally produced by the offender, but maintained through the victim's refusal to extend forgiveness.

How Does Forgiveness Improve Mental Health?

Unforgiveness allows negative emotions to build and accumulate, but little is known regarding how unforgiveness maintains and exacerbates these deleterious emotions. One possibility is that thinking about the offense afterwards elicits the same

negative feelings as the offense itself. According to this logic, the recalled memory of the offense may exacerbate the victim's negative emotions and maintain and perpetuate these feelings. Essentially, repeatedly thinking about an offense allows the offender to re-offend every time the negative events are mentally rehearsed. Baumeister, et al., (1998) speculated that if people hold a grudge they remain in the role of a victim by perpetuating negative emotions through cognitive rehearsal of the offense (i.e. rumination). Previous research has found that ruminating on the emotions and cognitions elicited by an offense results in negative emotional consequences.

Rumination and Anger

The length of an arousal response after a negative stimulus is longer than after a positive stimulus, as the negative affect is being perpetuated by persevering negative thoughts (Brosschot & Thayer, 2003). Essentially, the negative arousal state does not fade because the victim is replaying the negative event in her head, which produces the same negative emotions as the negative stimulus. Past research supports a relationship between ruminating on negative thoughts and an exacerbation and maintenance of negative feelings (Thomsen, et al., 2003). Ruminating on an interpersonal offense heightens the intensity of emotional states and extends the duration of the negative emotions. Specifically, rumination has been found to be strongly correlated to increases in the intensity and duration of anger (Simpson & Papageorgiou, 2003), and, overall, rumination had been found to be correlated with an angry mood state (Thomsen, et al., 2003).

Rumination and Depression

Previous research also points to a relationship between rumination and increased depression. In fact, in a sample of fourth to sixth graders rumination was found to be the best predictor of depression (Broderick & Korteland, 2004). Additionally, the presence of rumination accurately predicted the onset, frequency, and duration of depressive episodes in a non-clinical undergraduate sample (Papageorgiou & Wells, 2003). Further, rumination has been found to intensify negative cognitive biases in depression (Lavender & Watkins, 2004). Specifically, individuals who ruminate were found to anticipate a larger number of negative life events. Previous research has found a strong correlation between rumination and depressive symptoms (Papageorgiou & Siegle, 2003). Rumination increases symptom severity in depression (Boelen, van den Bout, & van den Hout, 2003) and increases the number of depressive symptoms (Treynor, Gonzalez, & Nolen-Hoeksema, 2003). Further, rumination was found to exacerbate depressed mood in adolescents who are suffering from major depressive disorder (Park, Goodyer, & Teasdale, 2004). Rumination is a well established risk factor for depression (Alloy, et al., 2004; Papageorgiou & Wells, 2003). Through various mechanisms, rumination increases the frequency, duration, and intensity of depressive symptoms thereby exacerbating depression.

Rumination and Anxiety

In addition, the relationship between rumination and increased anxiety has long been noted (Janis, 1958; Sergerstrom, Tsao, Alden, & Craske, 2000). For example, intrusive and recurrent cognitions following a stressful event have been found to be correlated with anxiety (Flett, Madorsky, Hewitt, & Heisel, 2002). In addition,

Harrington and Blankenship (2002) found a moderate correlation (i.e. r = .32) between

rumination and anxiety. In an undergraduate sample, rumination was found to be

correlated with generalized anxiety disorder (Clancy, 2004). Furthermore, high levels of

rumination predict frequency and severity of anxious symptoms (Nolen-Hoeksema,

2000). Additionally, an investigation of people with a fear of flying found those who

ruminated had significantly greater levels of anxiety compared to those who did not

ruminate (Kraaij, Garnefski, & Van Gerwen, 2003). Furthermore, when coping strategies

were compared between adults and adolescents, regardless of age, rumination was found

to be the most anxiety provoking coping strategy (Garnefski, Legerstee, Kraaij, van den

Kommer, & Teerds, 2002), and using rumination as a coping strategy was found to be a

predictor of anxious symptoms (Cox, Enns, & Taylor, 2001). Past research demonstrates

that rumination is an ineffective coping mechanism that increases anxiety.

Rumination and Forgiveness

There is preliminary evidence that repeatedly thinking about an offense

exacerbates anger, depression, and anxiety. Previous research also demonstrates a

negative relationship between rumination and forgiveness. Specifically, those who

cognitively rehearse thoughts and feelings regarding the offense have a lower motivation

to forgive (McCullough et al., 1998). As people become more forgiving their tendency to

ruminate decreases (McCullough et al., 1998). In addition, researchers have found that

the more people ruminate about an offense the harder it is for them to forgive that

offender (McCullough, 2000). Further, ruminating on thoughts, affects, and images

associated with abuse is correlated with greater avoidance and revenge motivations

toward the offender (McCullough, Bellah, Kilpatrick, & Johnson, 2001; McCullough,

Rachal, Sandage, Worthington, Brown, & Hight, 1998). Not only is ruminating about an offense correlated with decreased forgiveness, but also a tendency to ruminate in general is negatively correlated with forgiveness (McCullough, 2000). This follows in accordance with general research on rumination, which has linked rumination with perpetuating emotional duress following upsetting events and with psychological distress in general (Greenberg, 1995; Holman & Silver, 1996). In summation, rumination is negatively associated with forgiveness.

Rumination a Hypothesized Mediator between Forgiveness and Mental Health

As rumination increases anger, depression, and anxiety and is negatively correlated with forgiveness, there is reason to speculate that forgiveness works to reduce anger, anxiety, and depression through decreasing rumination. Consequently, this study will examine rumination as a mediator between forgiveness and reductions in negative health outcomes. Specifically, interpersonal rumination will be examined as the mediator between forgiveness and anger, depression, and anxiety.

A Refinement and Extension of Previous Rumination Research

Rumination can be defined as recurring emotion focused cognitions that are automatic, invasive and not beneficial. Recent research by Berry, et al. (in press) demarcates the need for subdividing rumination into separate types based on the content of the ruminative thoughts. Their study found that perseverative thoughts following an offense can vary in content, and the content of the rumination leads to different mental consequences for the victim. In their study, Berry et al. (in press) linked two different types of repetitive thought, vengeful rumination and depressive rumination to two different emotional consequences, anger and depression. Vengeful rumination is

negative recurrent and intrusive cognitions that are angry and revenge focused whereas, depressive rumination is negative repetitive and intrusive self hate cognitions.

The goal of Berry, et al.'s (in press) study was to empirically demonstrate that forgiveness leads to positive emotional health by decreasing and eliminating negative rumination. Rumination was examined as the mediator between forgiveness and decreases in anger, depression, and anxiety. Both vengeful rumination and depressive rumination were examined as potential mediators between forgiveness and all three deleterious emotional health outcomes.

Using an undergraduate sample, Berry et al. (in press) administered a series of self report questionnaires measuring the participant's level of trait anger, depression, and anxiety. Further, Berry et al. (in press) administered their Trait Forgiveness Scale to gain a measure of the participant's trait level of forgiveness. The Dissipation-Rumination Scale (DRS; Caprara, 1986), a 20 item self report scale that assesses participant's tendencies to think and act aggressively following an interpersonal offense, was used as their measure of vengeful rumination. The self hate scale from the Interpersonal Guilt Questionnaire-67 (O'Connor et al., 1997) was used as their proxy measure of depressive rumination. The self hate scale is comprised of 16 self-hate statements.

Using three separate series of regression analyses, Berry et al (in press) evaluated vengeful rumination as the mediator between forgiveness and depression, anxiety, and anger. Three regression analyses were performed to evaluate vengeful rumination as a potential mediator between forgiveness and depression. Vengeful rumination did not add a significant amount of predictive variance to depression above that of forgiveness alone. Therefore, vengeful rumination was not found to mediate the relationship between

forgiveness and depression. The second series of regression analyses evaluated vengeful rumination as a mediator between forgiveness and anxiety. Again, vengeful rumination did not add a significant amount of predictive variance to anxiety above that of forgiveness alone. Vengeful rumination does not mediate the relationship between forgiveness and anxiety.

However, the third set of regression analyses found vengeful rumination to be a significant mediator of the forgiveness anger relationship. Vengeful rumination added a significant amount of predictive variance to anger above that of forgiveness alone. Vengeful rumination, negative recurrent and intrusive cognitions that are angry and revenge focused, was found to mediate the relationship between forgiveness and anger. It can be argued that vengeful rumination increases unforgiveness. And, forgiveness reduces anger by first eliminating or preventing vengeful rumination.

Berry et al (in press) performed three other series of regression analyses evaluating depressive rumination as a mediator between forgiveness and anger, anxiety, and depression. The results indicate that depressive rumination does not significantly mediate the relationship between forgiveness and anger. Nor, does depressive rumination significantly mediate the relationship between forgiveness and anxiety. However, the results of the regression analyses indicate that depressive rumination significantly mediates the relationship between forgiveness and depression. It can then be argued that forgiveness reduces depression by first reducing negative repetitive and intrusive self hate cognitions. Berry et al.'s (in press) findings provide preliminary evidence indicating forgiveness leads to decreased negative emotions by first reducing rumination. Secondly, their findings suggest that the content of perseverative cognitions is linked with different

deleterious emotional health outcomes. Namely, vengeful rumination is correlated with increases in anger and depressive rumination is correlated with increases in depression. However, neither of the two types of rumination was found to mediate the relationship between forgiveness and anxiety.

Neither revenge rumination nor depressive rumination mediated the relationship between forgiveness and anxiety. These results might suggest that forgiveness decreases anxiety through another mechanism other than rumination. However, previous research on undifferentiated forms of rumination and its role in increasing and maintaining anxiety provides evidence to disprove this conclusion. Rumination has long been associated with increased anxiety (Janis, 1958; Sergerstrom, Tsao, Alden, & Craske, 2000). It may be that the forgiveness anxiety relationship is mediated by rumination, but the specific type of rumination has not yet been empirically demonstrated. Berry et al.'s (in press) research narrows the search for the mediator between forgiveness and anxiety by illustrating two types of rumination (i.e. vengeful and depressive) that do not act as mediators between forgiveness and anxiety.

There is a need to determine the type of rumination that mediates between forgiveness and anxiety. Not only is this of theoretical importance to fill in the gaps in Berry et al.'s (in press) model, but also this information would be beneficial for therapists working with anxious clients who are holding onto a grudge. By pinpointing the type of rumination that explains the relationship between forgiveness and anxiety, therapists will be better able to address this subtype of rumination in therapy. Through reducing this form of rumination, therapists would be able to help their client's decrease their anxiety.

For these reasons, this study will seek to extend Berry et al.'s (in press) research by identifying the type of rumination that mediates between forgiveness and anxiety.

Proposed Model

How Unforgiveness Leads to Emotional Duress

When confronted with an interpersonal transgression, previous research has demonstrated that the victim may perceive the transgression as offensive, hurtful, threatening, or a combination of those three (Tomaka, Blascovich, Kibler, Ernst, 1997). How the victim perceives the offense will determine his/her emotional response. For example, if the interpersonal violation was perceived as offensive (i.e. aggressive) frequently the dominant associated emotional reaction would be overt anger (Thoresen, et al., 1998). Overt anger results when the altercation is perceived as an attack against the victim and typically the victim is motivated to aggress against the offender (Kuppens, et al., 2004). If an interpersonal transgression is perceived as hurtful it may not provoke expressed anger and a motivation to aggress against the offender. Instead the victim may be left feeling inadequate and sad. If the victim is angry, he/she will most likely seethe with anger internally (Kuppens, et al., 2004). When an individual perceives an interpersonal transgression as threatening, fear will most likely be the dominant emotion and typically the victim will be strongly motivated to leave the confrontation (Dixon, 1998; Gilbert, 1992, 2000). Typically, when threatened, feelings of fear and anxiety will predominate over feelings of overt anger (Berkowitz & Harmon-Jones, 2004). Previous research has shown that even when individuals feel angry following an interpersonal offense, if they feel their safety is threatened they will suppress their anger as they

believe overt anger expression would be dangerous (Berkowitz & Harmon-Jones, 2004). Further, under threatening situations individuals will internalize their anger if they fear interpersonal rejection (Scott & Day, 1996). Even though the dominant emotional response may be determined based on the victim's perception of the offense, all three major deleterious emotions (i.e. anger, depression, and anxiety) may be experienced in varying degrees no matter what the perception of the offense.

An interpersonal offense may elicit many negative emotions from the victim. If these negative emotions are not appropriately dealt with through extending forgiveness, these emotions will increase in intensity and severity. For example, if a victim holds a grudge over extending forgiveness, her initial anger following an offense may grow and accumulate developing into an enduring angry personality trait. If a victim denies forgiveness, his feelings of inadequacy and sadness following an offense may develop into trait depression. Unaddressed fear following an offense may grow into trait anxiety. Internalized anger may also build and accumulate. Without forgiveness all of the victim's negative emotions will not only be maintained but exacerbated.

Essentially, previous research suggests that an unforgiving personality leads to negative emotional consequences (i.e. trait anger, depression, and anxiety). Recent research by Berry et al. (in press) proposes that this link can be partially explained through rumination. That is ruminating on various aspects surrounding an offense maintains the negative emotions associated with the offense. It is proposed that forgiveness works in two ways, directly and indirectly. Directly, an unforgiving personality leads to increased emotional duress (see Figure 1). Indirectly, an unforgiving personality increases the victim's tendency to ruminate. This tendency to ruminate then

increases her emotional distress (see Figure 1). Rumination acts as a mediator between

forgiveness and emotional distress. This study will seek to empirically validate this

model in which an unforgiving personality leads to emotional distress both directly and

indirectly through increasing rumination.

FIGURE 1

How unforgiveness leads to emotional distress
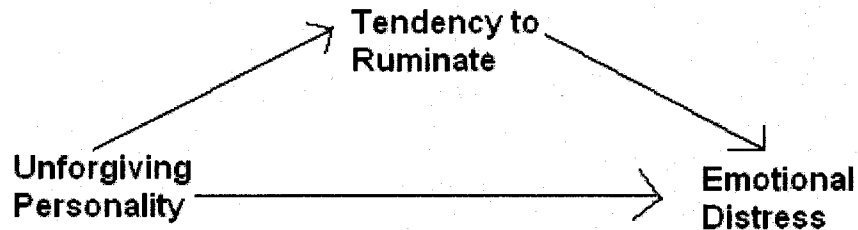
Interpersonal Rumination: The Hypothesized Mediator between Forgiveness and Anxiety

As previously discussed, Berry et al. (in press) examined two specific types of

rumination (i.e. vengeful and depressive) and found they mediated the relationship

between forgiveness and certain negative emotions (i.e. anger and depression). They

found that ruminating on angry revenge focused thoughts mediates the relationship

between unforgiveness and increased anger. In their study, repeatedly dwelling on self

hate cognitions mediated the relationship between unforgiveness and increased

depression. However, the specific type of rumination that leads to increases in anxiety

has not yet been illuminated. The second goal of this study is to find the type of

rumination that mediates the relationship between forgiveness and anxiety.

As previously explained, anxiety is the predominant emotional response when the

victim perceives the offense to be threatening. Therefore, information regarding the type

of rumination that might exacerbate and maintain feelings of anxiety can be drawn from

research on a sample of individuals who suffered an injustice perceived as threatening.

Child sexual abuse survivors most likely perceived their interpersonal offenses as threatening. As a result, this population suffers from elevated levels of anxiety and high levels of internalized anger (Scott & Day, 1996). It is probable that child sexual abuse survivors internalized their anger out of fear. Victims of child sexual abuse feel vulnerable as a result of their abuse.

Research on this population suggests child sexual abuse survivors fear interpersonal rejection and suffer with issues around safety, trust, and intimacy (Donovan & McIntyre, 1990). The dysfunctional thoughts found to fuel their anxiety were thoughts about future interpersonal rejection (e.g. "the world is a dangerous place" and "I avoid others because they might hurt me"; Wenninger & Ehlers, 1998, p. 287). These thinking patterns view every future interpersonal encounter as a potential for social failure. Repetitive thoughts focused on the danger associated with interpersonal relations and the constant threat of experiencing an interpersonal offense would encourage feelings of anxiety and maintain them over the long term.

Generalizing, from this specific offense to all trespasses that are viewed to be threatening, it makes theoretical sense that a threatening interpersonal offense may leave the victim with doubts about future interpersonal encounters. Ruminating on interpersonal failure would then lead to anxiety. Consequently, in this study interpersonal rumination will be examined as a possible mediator between forgiveness and anxiety. Repetitive intrusive thoughts such as "I worry about others getting to close to me" and "I worry I will be hurt if I allow myself to become to close to others" are thought to maintain and exacerbate anxious feelings. But, it is proposed that forgiveness eliminates these repetitive thoughts. It is hypothesized that choosing to forgive the

offender frees the victim from constantly ruminating on the offense and the emotions evoked by the offense. Then, the absence of these negative thoughts would result in decreases in anxiety.

Purpose

The overall purpose of this study is to explain how forgiveness works to reduce the negative emotional consequences of holding a grudge. It is proposed that forgiveness leads to reductions in the deleterious emotional consequences of holding a grudge both directly and indirectly (see Figure 1). Directly, unforgiveness leads to increases in negative emotions (i.e. anger, depression, and anxiety). Indirectly, unforgiveness leads to increases in rumination, which then results in increases in emotional duress (see Figure 1). The main purpose of this study is to lend support to Berry et al.'s (in press) work by demonstrating that rumination mediates the relationship between forgiveness and negative emotional consequences. Rumination will be examined in order to determine if the tendency to ruminate increases negative emotions and is negatively associated with the tendency to forgive. It is proposed that forgiveness reduces rumination, which leads to reductions in negative emotions.

The second goal of this study will be to delineate the type of rumination that leads to increases in anxiety. As previous research on rumination has found negative correlations between the tendency to ruminate and anxiety and as previous research suggests a possible link between repetitive thoughts of interpersonal failure and anxiety, it is expected that high levels of interpersonal rumination (i.e. repetitive thoughts of interpersonal failure) will predict high levels of anxiety. Further, it is anticipated that high levels of unforgiveness will predict high levels of interpersonal rumination, as

previous research has found a negative association between the tendency to rumination and dispositional forgiveness. Lastly, it is hypothesized that, as interpersonal rumination is positively linked with anxiety, but negatively linked with forgiveness, and as forgiveness is negatively linked with anxiety, interpersonal rumination will be a mediator between forgiveness and anxiety. We anticipate that differences in the tendency to repeatedly ruminate on future potential relational failure will partially explain the negative relationship between forgiveness and anxiety.

Hypothesis One

It is expected that high levels of forgiveness will be associated with low levels of the negative consequences of holding a grudge. Specifically, it is expected that forgiveness will significantly predict low levels of anger, depression, and anxiety over and above the variance attributed by rumination. This hypothesis is based on a large body of research which has linked an unforgiving personality style with high levels of anger, depression, and anxiety.

Hypothesis Two

Secondly, an indirect effect of forgiveness on mental health is expected with rumination partially mediating the relationship between forgiveness and negative emotional health. It is expected that interpersonal rumination will partially mediate the relationship between forgiveness and anger, depression, and anxiety. The hypothesized indirect mechanisms of how forgiveness works is that forgiveness works to reduce anger, depression, and anxiety through first reducing rumination. The reduction in rumination is then followed by a reduction in negative emotions.

Hypothesis Three

Although it is expected that interpersonal rumination will be found as a significant

mediator between forgiveness and anger, depression, and anxiety, it is expected that

interpersonal rumination will account for the greatest amount of the relationship between

forgiveness and anxiety. This is based on research which found that thoughts of future

interpersonal failure exacerbated individuals' anxiety following a threatening offense

(Donovan & McIntyre, 1990). It may be that a threatening interpersonal offense leaves

the victim with doubts about future interpersonal encounters, and ruminating on future

interpersonal failure would then lead to anxiety. Therefore, forgiveness is proposed to

work to reduce anxiety, through first reducing interpersonal rumination, which then

reduces anxiety.

METHOD

Participants

A total of 571 (93 male and 478 female) undergraduate students were selected

from the University of Windsor research participant pool. The students ranged in age

from 17 to 50 with a mean age of 22. Further demographic information is provided in

Table 1. It includes sex, ethnicity, and relationship status for the overall group of

participants.

TABLE 1
Demographic Information

Variable	Total (%)
Sex	
Females	478 (83.7)
Males	93 (16.3)
Ethnic Background	
Caucasian	355
Latino	3
Middle Eastern	41
Aboriginal	9
Asian	43
African	48
European	53
Relationship Status	
Single	505 (88.4)
Married	33 (5.8)
Common-Law	22 (3.9)
Divorced	7 (1.2)

The students volunteered to participate in this study in exchange for bonus marks directed towards one of their psychology courses. Undergraduate university students were selected based on convenience and availability. However, previous research indicates that the ability to fully understand forgiveness emerges after high school (Enright, Santos, & Al-Mabuk, 1989). Therefore, university aged students make good subjects for the investigation of the mechanisms for how forgiveness works to improve mental health.

Procedure

This study utilizes previously collected data. The purpose of the original study, titled "Personality, health, and parental characteristics", was to examine how the characteristics of some types of parents may affect their offspring. In particular, the study examined how parental depression and drinking patterns influenced their offspring. Another aim

of the study was to examine the extent to which parental characteristics influence

emotional factors among the offspring and the offspring's willingness to forgive.

The original study collected a broad variety of information on the offspring, ranging

from emotional characteristics to health patterns to some aspects of spirituality. The

following questionnaires were included in the test battery: Ambivalence Over Emotional

Expression Scale, Beck Anxiety Inventory, Beck Depression Inventory, Compulsiveness

Inventory, Eating Attitudes Test, Family Expressiveness Questionnaire, Gambling Screen

8, Guilt-Seeking-Forgiveness Scale, Health Illness Symptoms, Heartland Forgiveness

Scale, Inventory of Interpersonal Problems, Medical Outcome Scale, Narcissistic

Personality Inventory, O'Brian Multiphasic Narcissistic Inventory, Parental

Psychopathology, Paulhus seven, Relationship Questionnaire, Relationship Style

Quesitonnaire, Self-Righteous Scale, Spiritually Enriched Study, State Trait Anxiety

Inventory, Trait Anger Scale, Tagney self-report shame guilt, Toronto Alexithymia Scale

– 20, TOSCA- three adult shame scale, Your Current Relationships – empathy, TRIM,

Demographics, Children of Alcoholics Screening Test, AUDIT, BSRS, PDQ-four, and

perceived guilt inventory state and trait. From this large test battery, select measures

were chosen for the current study including: the Demographics questionnaire, the

Heartland Forgiveness Scale, Beck Anxiety Inventory, Beck Depression Inventory, Trait

Anger Scale, and the Relationships Style Questionnaire from which the proxy measure of

interpersonal rumination was derived. Although most of the measures desired were

present in the data set, as this study utilized archival data, there were limitations on what

measures could be selected.

University of Windsor ethics board approval was obtained for the original study "Personality, Health and Parental Characteristics". And, University of Windsor ethics board approval was obtained for the archival use of the data. Following the original ethics approval, the participants from the undergraduate research participant pool were contacted to inquire if they would like to fill out several online lifestyle questionnaires. If the participants consented, they were given a password and were able to access a website to complete a battery of questionnaires online, including the measures selected for this study. Steps were taken to ensure the security of the internet site. The website was constructed on a secure University of Windsor server, and access could only be obtained with an assigned identification and password. Further, the technical services at the University of Windsor placed the website through rigorous testing to ensure that no one could gain access to the site without an assigned identification and password. In addition, the website was designed to automatically shut down after an allotted amount of time if not in use. This security measure was necessary as the participants could access the site from public terminals. To help maintain the security of the questionnaires participants could not go back to a previous page. This security measure was put into place to help prevent the participants from copying out the questionnaires.

Although consent is required via an email response in order to obtain a password, the website also required the participants to sign an online consent form, which explained the study in more detail. Participants were asked to complete the online questionnaires in one sitting, but as this process may take several hours the participants were given up to a week to complete all the questionnaires. Once the participants completed the questionnaires online, a debriefing form popped up on the screen, which further

explained the purpose of the research to the participants and thanked them for their

participation.

<div align="center">Measures</div>

All of the measures used were self report questionnaires completed online by the

participants.

Demographic and Background Variables

Participant's completed a demographics questionnaire. The questionnaire gathers

information on age, sex, ethnicity, and level of education.

Heartland Forgiveness Scale

The Heartland Forgiveness Scale (HFS) is a self report measure of trait

forgiveness (as conceptualized by Snyder & Thompson, 2000). It provides a measure of

the participant's usual propensity to forgive in every day situations. Participants reported

how they typically respond to transgressions on a 7 point Likert scale (i.e. 1=Almost

Always False of Me, 7=Almost Always True of Me). The HFS consists of four subscales

(i.e. Forgiveness of Self, Forgiveness of Others, Forgiveness of Situations, Pseudo

forgiveness) of which only the subscale, Forgiveness of Others, was used in this study. It

contained six items such as "I continue to be hard on others who have hurt me".

Psychometric examination reveals that scores on the Forgiveness of Others

subtest of the HFS to be positively correlated with other measures of forgiveness,

measures of hope, cognitive flexibility, relationship satisfaction, and social desirability

(Thompson & Snyder, 2003). Further construct validation found negative correlations

with vengeance, pathological psychological symptoms, and chronic hostility (Snyder &

Thompson, 2000).

Further, Snyder, et al. (in press) reported the Forgiveness of Others subtest of the

HFS repeatedly demonstrated satisfactory internal consistency when tested on various

groups of college students (cronbachs alpha = .83). Further, the test retest reliability for

the HFS was found to be 0.82 overall and 0.75 for the Forgiveness of Others subtest

(Thompson & Snyder, 2003).

Beck Anxiety Inventory

The Beck Anxiety Inventory (BAI) is a self report measure of trait anxiety. The

BAI measures the participant's general level of anxiety. It consists of a list of 20

symptoms (e.g. dizzy or lightheaded) to which the participants used a Likert scale to

indicate the degree each symptom bothered them in the past week. Previous studies

reported high internal consistency ranging from .88 to .92 (Steer, Ranieri, Beck, & Clark,

1993). Further, a recent reliability and validity assessment on 2 704 Caucasian Americans

and 1 110 Latino college students revealed high internal consistency coefficients, all

alphas exceeded .82 (Contreras, Fernandez, Malcarne, Ingram, & Vaccarino, 2004).

Beck Depression Inventory II

The Beck Depression Inventory Second Edition (BDI-II) (Beck et al., 1996), a

revision of the Beck Depression Inventory (Beck et al., 1961), is a widely used self report

measure of trait depression. The BDI-II measures the participant's general level of

depression. It consists of 21 groups of statements of which the participants chose the one

most fitting to how they felt during the past two weeks (E.g. I do not feel sad, I feel sad

much of the time, I am sad all the time, I am so sad or unhappy that I can't stand it).

Previous studies, using an undergraduate population, have cited the measures coefficient

alphas to range between .89 and .91 (Beck, Steer, Ball, & Ranieri, 1996). An

examination of the validity and reliability of the BDI-II on a psychiatric population found

a high internal consistency coefficient (coefficient alpha = .91).

Trait Anger Scale

The Trait Anger Scale (TAS) is a self report questionnaire that measures the

participant's general level of anger. The participants were asked to rate how often they

generally feel or react angrily on 10 items (e.g. I am quick tempered and I fly off the

handle) using a 5 point Likert scale. Previous studies have reported internal consistencies

ranging from .88 to .97 (Spielberger, Jacobs, Russell, & Crane, 1983).

Proxy Measure of Interpersonal Rumination

Eight items were selected from the Relationship Scale Questionnaire to be used as a

proxy measure of interpersonal rumination (Griffin & Bartholomew, 1994). These eight

items were selected as they measure the individual's degree of worrying about future

interpersonal failure. Together the items form a proxy measure of interpersonal

rumination, which is the degree to which the participant repeatedly focuses on future

relational failures (E.g. I worry about being alone). Using a 5 point Likert scale the

participants rated how much the statements regarding interpersonal worry characterize

them (1= Not at All Like Them to 5 = Very Much Like Them). As a proxy measure of

interpersonal rumination, this scale has not yet been assessed for validity and reliability.

RESULTS

SPSS software was used to analyze the following results. The first section of the

results depicts the descriptive statistics. Means, standard deviations, and alpha scores are

presented for each measure. Further, the inter correlations for all measures are presented.

The second section of the results describes the mediation analyses. Within this section a

separate segment describes each series of three regression analyses performed to test for

the mediating effect of rumination on the relationships between forgiveness and each of

the three dependent variables (i.e. anger, depression, and anxiety). This section is

followed by a summary section, which presents the results in terms of the three

hypotheses.

<div align="center">Descriptive Statistics</div>

Descriptive statistics were gathered for all measures. Table 2 contains the

Cronbach's alpha statistic (Cronbach, 1951), mean scores, and standard deviations

computed for all the scales among the present sample.

<div align="center">TABLE 2
Descriptive statistics for the Measures</div>

Measure	α	M	SD
Beck Depression Inventory	.92	11.74	9.74
Beck Anxiety Inventory	.92	31.07	9.46
Trait Anger Scale	.81	19.52	5.48
Heartland Forgiveness Inventory	.80	29.94	6.68
Interpersonal Rumination	.89	22.93	7.90

As can be seen in Table 2, all measures demonstrated adequate reliability ($\alpha \geq$

.80). The proxy measure of interpersonal rumination demonstrated good reliability ($\alpha =$

.89), as can be seen in Table 2, promoting confidence in the use of this measure as an

assessment of the participant's degree of trait worry over future interpersonal relations.

The BDI, BAI, TAS, and HFI, yielded mean scores and standard deviations, as seen in

the last two columns of Table 2, commensurate with other university samples.

Preliminary Analyses

Pearson Product moment correlations were calculated to explore the relationships between all the subscales and these are shown in Table 3.

TABLE 3
Correlations of assessment instruments (sexes combined)

	Trait Anger Scale	Beck Depression Inventory	Beck Anxiety Inventory	Heartland Forgiveness Inventory	Interpersonal Rumination
Trait Anger Total	1.000				
Beck Depression Inventory	.407**	1.000			
Beck Anxiety Inventory	.267**	.620**	1.000		
Heartland Forgiveness Inventory	-.398**	-.274**	-.186**	1.000	
Interpersonal Rumination	.374**	.491**	.362**	-.246**	1.000

** Correlation is significant at the 0.01 level (2-tailed).
Note: Due to missing data, sample sizes ranged from N=566 to N=571.

As expected, the results, shown in Table 3, indicate forgiveness shares significant negative correlations with anger, depression, and anxiety. That is, individuals with a propensity to forgive also have low levels of anger, depression, and anxiety. This finding provides preliminary support for hypothesis one, which states that higher levels of forgiveness predict lower levels of anger, depression, and anxiety. Secondly, as predicted, interpersonal rumination shares significant positive correlations with anger, depression, and anxiety. Those who tend to ruminate on future interpersonal failure have higher levels of anger, depression, and anxiety. Lastly, as hypothesized, forgiveness and interpersonal rumination are negatively correlated. High levels of forgiveness are positively associated with low levels of rumination as defined by repetitive intrusive thoughts of future interpersonal failure. As all correlations are in the anticipated

direction, the criteria have been met in order to perform regressions to test for the direct

and indirect mechanisms of how forgiveness works to improve mental health.

To look for any discrepancies between the men's and the women's scores on the

measures, separate correlation matrixes for men and women are provided in Tables 4 and

5. The decision to examine the correlation matrixes separately for men and women was

not because previous research suggests a reason why men and women may differ.

Correlation matrixes were examined separately simply to ensure that men and women do

not differ dramatically on any of the variables.

TABLE 4
Correlations of assessment instruments for women only

	Trait Anger Scale	Beck Depression Inventory	Beck Anxiety Inventory	Heartland Forgiveness Inventory	Interpersonal Rumination
Trait Anger Total	1.000				
Beck Depression Inventory	.412**	1.000			
Beck Anxiety Inventory	.282**	.610**	1.000		
Heartland Forgiveness Inventory	-.397**	-.266**	-.194**	1.000	
Interpersonal Rumination	.380**	.470**	.354**	-.253**	1.000

** Correlation is significant at the 0.01 level (2-tailed).
Note: Sample sizes range from N=474 to N=478.

TABLE 5
Correlations of assessment instruments for men only

	Trait Anger Scale	Beck Depression Inventory	Beck Anxiety Inventory	Heartland Forgiveness Inventory	Interpersonal Rumination
Trait Anger Total	1.000				
Beck Depression Inventory	.375**	1.000			
Beck Anxiety Inventory	.174	.658**	1.000		
Heartland Forgiveness Inventory	-.443**	-.413**	-.214*	1.000	
Interpersonal Rumination	.332**	.582**	.380**	-.296**	1.000

*   Correlation is significant at the 0.05 level (1-tailed).
** Correlation is significant at the 0.01 level (2-tailed).
Note: Sample sizes ranged from N=92 to N=93.

The pattern of correlations for the variables, as seen in Tables 4 and 5, appears

much the same for males as it does for females. Subsequently, all analyses were

performed for the overall sample.

Mediation Analyses

A variable may be considered a mediator if it complies with four criteria: the

predictor must significantly affect the potential mediator, the predictor must significantly

affect the dependent measure, the potential mediator must significantly affect the

dependent variable, and the relationship between the predictor and the dependent measure

is less after taking out the variance attributed by the potential mediator (Baron & Kenny,

1986). In the present study, a series of multiple regressions were used to assess the

potential mediating relationship as recommended in (Holmbeck, 1997). The first

regression analysis was run with the predictor variable predicting the mediator. The second regression analysis was run with the predictor variable predicting the dependent variable. The third regression analysis was run with the predictor variable and the mediator variable predicting the dependent variable. For the third regression analyses, simultaneous entry is recommended over hierarchical entry to allow for the effect of the mediator on the dependent variable to be examined after the predictor is controlled and to allow for the effect of the predictor on the dependent measure after the mediator is controlled (Baron & Kenny, 1986). This method is borrowed from the path-analytic methodology (Nie et al., 1975).

Complete mediation is demonstrated if the relationship between the predictor and the dependent measure is no longer significant after taking out the variance attributed by the mediator. MacKinnon, et al. (2002) suggest that models in which there is only partial mediation (i.e. the relationship between the predictor and the dependent is smaller after taking out the variance attributed by the mediator, but still significant) are acceptable. In fact, MacKinnon et al. (2002) argue that these models are more realistic in psychology research, as a single mediator should not be expected to completely explain the relationship between an independent and a dependent variable.

In regards to partial mediation or the presence of an intervening variable, compliance with the aforementioned four criteria as tested by the series of regressions, are used to informally judge whether or not mediation is occurring. That is, it is necessary to first demonstrate, using a series of regression analyses, that the relationship between the predictor variable and the dependent variable is less after taking out the variance attributed by the potential mediator. MacKinnon and Dwyer (1993) and MacKinnon,

Warsi, and Dwyer (1995) have popularized statistically based methods to formally assess for the presence of partial mediation. The Sobel test is the most commonly used test to assess the significance of the mediating variable effect (Sobel, 1982). MacKinnon, Lockwood, Hoffman, West, & Sheets (2002) compared 14 different statistical procedures used to evaluate the partial mediating effect in order to determine the best method of evaluating the mediating variable effect. Among others they recommended the use of the Sobel test as it demonstrates a low probability of yielding a Type 1 error. The Sobel test evaluates the mediating variable effect by dividing the estimate of the intervening variable effect ($\alpha\beta$) by its standard error and comparing this value to a standard normal distribution (MacKinnon, et al., 2002). The Sobel test is not available through SPSS, but can be calculated on the interactive mediation test website found at http://www.unc.edu/~preacher/sobel/sobel.htm.

In this study, three separate regression analyses were run to evaluate interpersonal rumination as a mediator between forgiveness and anger, forgiveness and depression, and forgiveness and anxiety.

FIGURE 2
Mediation Model
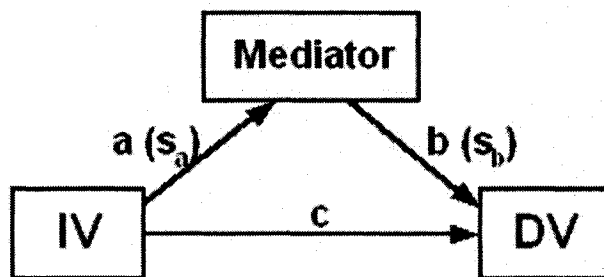
a,b,c = Standardized Beta weights
Sa, Sb = Standard error

Interpersonal Rumination as a Mediator between Forgiveness and Anger

A series of regression analyses were run to evaluate interpersonal rumination as a mediator between forgiveness and anger. For the following analyses, please consult Figure 3 and Table 6. Figure 3 visually illustrates the mediation model and includes standardized Beta weights and standard errors for the three regressions. Table 6 displays the unstandardized regression coefficients ($\underline{B}$), the standardized regression coefficients (β), the standard errors, $\underline{R}$, $\underline{R^2}$, adjusted $\underline{R^2}$, and the semi-partial correlations for all three regression analyses.

Using bivariate simple linear regression, forgiveness was assessed as a predictor of interpersonal rumination. This relationship was significant, $\underline{R^2} = .60$, $F(1, 569) = 36.59$, $p < .001$. Forgiveness accounts for 60% of the variance in interpersonal rumination. As can be seen in Table 6, the($\underline{B}$) for this association was -.291, which is consistent with the zero-order Pearson correlation coefficient reported in Table 3 ($r = -.246$, $p < .01$).

A second bivariate regression analysis was run measuring the predictive relationship between forgiveness and anger. Forgiveness was found to significantly predict anger, $\underline{R^2} = .158$, $F(1, 565)=106.03$, $p < .01$. Forgiveness accounts for 16% of the variance in anger. The ($\underline{B}$) for this association was -.325, which is commensurate with the zero-order Pearson correlation coefficient ($r = -.398$, $p < .01$).

A third analysis used multiple regression to assess both forgiveness and interpersonal rumination as predictors of anger. The overall model was significant $\underline{R^2} = .240$, $F(2, 564)=88.90$, $p < .01$). Together forgiveness and interpersonal rumination account for 24% of the variance in anger. The total effect of increases in forgiveness and

decreases in interpersonal rumination on decreases in anger is β=-.47. Additionally, the results of the regression analysis demonstrated interpersonal rumination to be a significant predictor of anger, (B) = .205, which is consistent with the zero-order Pearson correlation coefficient (r = .374, p<.01) reported in Table 3.

The first three criteria that are necessary for a variable to be considered a mediator have been met. The predictor, forgiveness, significantly affects the potential mediator, rumination. The predictor, forgiveness, significantly affects the dependent variable, anger. And, the potential mediator, rumination, significantly affects the dependent variable, anger. Further, the fourth criterion (i.e. the relationship between the predictor and the dependent measure being less after taking out the variance attributed by the potential mediator) was met. The relationship between forgiveness and anger was less after taking out the variance attributed by interpersonal rumination (β=-.398 to β=-.326), but was still significant. As the relationship was still significant, the results of the regression analyses demonstrate that interpersonal rumination does not completely mediate the relationship between forgiveness and anger. There is evidence for a direct effect of forgiveness on anger. This lends support to hypothesis one demonstrating that unforgiveness holds a direct effect on increases in anger. The strength of the direct effect of forgiveness on anger is β=-.398, meaning for every one standard deviation increase in forgiveness there is a .40 standard deviation decrease in anger.

As the relationship between forgiveness and anger was less after taking out the variance attributed by interpersonal rumination (β=-.398 to β=-.326), the results of the regression analyses suggest the possibility of partial mediation or an indirect effect of forgiveness on anger. The Sobel test was run to test for the significance of the mediating

variable effect. The results of the Sobel test were significant, z = -4.806, p < .001, indicating the presence of an indirect effect of forgiveness on anger. The strength of the indirect relationship is β = - .073, meaning for every one standard deviation increase in forgiveness there is a .07 decrease in anger. As anticipated, interpersonal rumination significantly partially mediates the relationship between forgiveness and anger. This finding lends support to hypothesis two, which speculates that forgiveness reduces negative emotions through first reducing rumination.

In accordance with both hypothesis one and two, the results of the first series of regression analyses indicate that forgiveness works to reduce anger both directly and indirectly through reducing interpersonal rumination (see Figure 3).

TABLE 6

Results of the three regression analyses evaluating interpersonal rumination as a mediator between forgiveness and anger

		Unstandardized Coefficient B	Standard Error	Beta B	R	R Square	Semi-Partial Correlation
Forgiveness predicts Interpersonal Rumination		-.291	.048	-.246	.246	.060	-.246
Forgiveness predicts Anger		-.325	.032	-.398	.398	.158	-.398
Forgiveness and Interpersonal Rumination predict Anger	Forgiveness	-.267	.031	-.326	.490	.240	-.316
	Rumination	.205	.026	.295			.286

FIGURE 3

A mediation analysis examining the effects of forgiveness on anger with rumination as the mediator
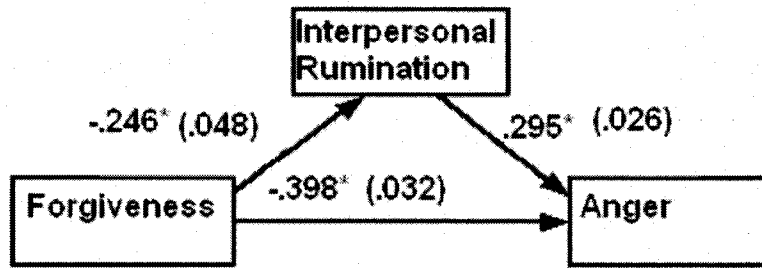
* The coefficients with an asterisk indicate significant standardized Beta weights, and the coefficients in parentheses indicate the standard error.

Interpersonal Rumination as a Mediator between Forgiveness and Depression

A second series of regression analyses were run to evaluate interpersonal rumination as a mediator between forgiveness and depression. Please refer to Figure 4 for a diagram of the mediation model. Regression statistics are provided in Table 7.

The first bivariate regression analysis was run assessing forgiveness as a predictor of interpersonal rumination. This relationship was significant (statistics reported above). A bivariate second regression analysis was run measuring the predictive relationship between forgiveness and depression. Forgiveness was found to significantly predict depression, R^2 = .075, (F(1, 568)=46.22, p <.01). Forgiveness accounts for 8% of the variance in depression. Further, the (B) = -.400. This correlation is higher than the zero-order Pearson correlation coefficient (r = -.274, p<.01) reported in Table 3.

A third analysis used multiple regression to measure both forgiveness and interpersonal rumination as predictors of depression. The results of the regression indicate the overall model was significant R^2 = .267, F(2, 567)=103.05, p <.01). Together forgiveness and interpersonal rumination account for 27% of the variance in

depression. The strength of the overall effect of increases in forgiveness and decreases in interpersonal rumination on decreasing depression is β= -.385. Further, the results of the regression analysis indicate interpersonal rumination significantly predicts depression, (B) = .557, which is consistent with the zero-order Pearson correlation coefficient (r = .491, p<.01) reported in Table 3.

The first three criteria that are necessary for a variable to be considered a mediator have been met. The predictor, forgiveness, significantly affects the potential mediator, rumination. The predictor, forgiveness, significantly affects the dependent variable, depression. And, the potential mediator, rumination, significantly affects the dependent variable, depression. Further, the fourth criterion (i.e. the relationship between the predictor and the dependent measure being less after taking out the variance attributed by the potential mediator) was met. The relationship between forgiveness and depression was less after taking out the variance attributed by interpersonal rumination (β=-.274 to β=-.164). However, the relationship was still significant. As the relationship was still significant, the results of the regression analyses demonstrate that interpersonal rumination does not completely mediate the relationship between forgiveness and depression. There is evidence for a direct effect of forgiveness on depression. The strength of the direct effect of forgiveness on depression is β=-.274. A one standard deviation increase in forgiveness would result in a .27 standard deviation decrease in depression. This lends further support to hypothesis one demonstrating that unforgiveness holds a direct effect on increases in depression.

As the relationship between forgiveness and depression was less after taking out the variance attributed by interpersonal rumination (β=-.274 to β=-.164), the results of the

regression analyses suggest the possibility of partial mediation or an indirect effect of forgiveness on depression. The Sobel test was run to test for the significance of the mediating variable effect. The results of the Sobel test reveal a statistically significant indirect effect, $(z = -5.421, p < .001)$. Interpersonal rumination mediates the relationship between forgiveness and depression. The strength of the mediation path is $\beta = -.111$, meaning a one standard deviation change in forgiveness will indirectly decrease depression by .11 standard deviation. As anticipated, interpersonal rumination significantly partially mediates the relationship between forgiveness and depression. This finding lends further support to hypothesis two, which postulates that forgiveness reduces negative emotions through first reducing rumination.

In accordance with both hypothesis one and two, the results of the second series of regression analyses indicate that forgiveness works to reduce depression both directly and indirectly through reducing interpersonal rumination (see Figure 4).

TABLE 7

Results of the three regression analyses testing interpersonal rumination as a mediator between forgiveness and depression

		Unstandardized Coefficient B	Standard Error	Beta β	R	R Square	Semi-Partial Correlation
Forgiveness predicts Interpersonal Rumination		-.291	.048	-.246	.246	.060	-.246
Forgiveness predicts Depression		-.400	.059	-.274	.274	.075	-.274
Forgiveness and Interpersonal Rumination predict Depression	Forgiveness	-.239	054	-.164	.516	.267	-.159
	Rumination	.557	.046	.451			.437

FIGURE 4

A mediation analysis examining the effects of forgiveness on depression with rumination as the mediator
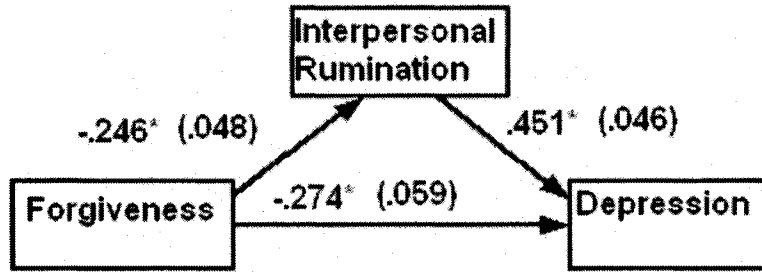
* The coefficients with an asterisk indicate significant standardized Beta weights, and the coefficients in parentheses indicate the standard error.

Interpersonal Rumination as a Mediator between Forgiveness and Anxiety

A series of regression analyses were run to evaluate interpersonal rumination as a mediator between forgiveness and anxiety. Please refer to Figure 5 for a visual illustration of the mediation model and to Table 8 for a complete list of the regression statistics. The first bivariate regression analysis was run assessing forgiveness as a predictor of interpersonal rumination; as previously mentioned, the relationship was significant $(F(1, 569) = 36.59, p < .01)$.

A second bivariate regression analysis was run measuring the predictive relationship between forgiveness and anxiety. The results indicate this relationship was significant $\underline{R^2} = .035, F(1, 569) = 20.427, p < .01$. Forgiveness accounts for 4% of the variance in anxiety. Further as can be seen in Table 8, the ($\underline{B}$) for this association was -.264, which is commensurate with the zero-order Pearson correlation coefficient reported in Table 3 $(r = -.186)$.

A third analysis used multiple regression to measure both forgiveness and interpersonal rumination as predictors of anxiety and this overall model was found to be

significant $\underline{R^2}$ = .141, F(2, 568) = 46.782, p <.01). In other words, together forgiveness

and interpersonal rumination account for 14% of the variance in anxiety. The total effect

of increases in forgiveness and decreases in interpersonal rumination on decreases in

anxiety is β = -.269. In addition, the results of this regression analysis indicate that

interpersonal rumination is a significant predictor of anxiety, (B̲) = .404, which is

consistent with the zero-order Pearson correlation coefficient (r = .362, p<.01).

The first three criteria that are necessary for a variable to be considered a mediator

have been met. The predictor, forgiveness, significantly affects the potential mediator,

rumination. The predictor, forgiveness, significantly affects the dependent variable,

anxiety. And, the potential mediator, rumination, significantly affects the dependent

variable, anxiety. Further, the fourth criterion (i.e. the relationship between the predictor

and the dependent measure being less after taking out the variance attributed by the

potential mediator) was met. The relationship between forgiveness and anxiety was less

after taking out the variance attributed by interpersonal rumination (β=-.186 to β=-.103),

but was still significant. As the relationship was still significant, the results of the

regression analyses demonstrate that interpersonal rumination does not completely

mediate the relationship between forgiveness and anxiety. There is evidence for a direct

effect of forgiveness on anxiety. This lends support to hypothesis one demonstrating that

unforgiveness holds a direct effect on increases in anxiety. The strength of the direct

effect of forgiveness on anxiety is β = -.186. Forgiveness directly reduces depression

with one standard deviation increase in forgiveness resulting in a .19 standard deviation

decrease in anxiety.

As the relationship between forgiveness and anxiety was less after taking out the variance attributed by interpersonal rumination ($\beta=-.186$ to $\beta=-.103$), the results of the regression analyses suggest the possibility of partial mediation or an indirect effect of forgiveness on anxiety. The Sobel test was run to test for the significance of the mediating variable effect. The results of the Sobel test were significant, $z = -4.806$, $p < .001$, indicating the presence of an indirect effect of forgiveness on anxiety. The strength of the indirect effect is $\beta = -.083$. A one standard deviation increase in forgiveness indirectly decreases anxiety by a .08 standard deviation. As anticipated, interpersonal rumination significantly partially mediates the relationship between forgiveness and anxiety. This finding lends support to hypothesis two, which speculates that forgiveness reduces negative emotions through first reducing rumination.

However, hypothesis three was not supported. Interpersonal rumination did not mediate more of the relationship between forgiveness and anxiety than between forgiveness and depression. The indirect of interpersonal rumination on the forgiveness depression relationship was $\beta= -.111$, which is larger than the indirect effect of the forgiveness anxiety relationship ($\beta = -.083$). Interpersonal rumination is not a stronger mediator between forgiveness and anxiety. Instead, interpersonal rumination explains more of the forgiveness depression relationship, followed by the forgiveness anxiety relationship, and explains the least amount of the variance in the forgiveness anger relationship.

In accordance with both hypothesis one and two, the results of the first series of regression analyses indicate that forgiveness works to reduce anxiety both directly and indirectly through reducing interpersonal rumination (see Figure 5).

TABLE 8
Results of the three regression analyses testing interpersonal rumination as a mediator
between forgiveness and anxiety

		Unstandardized Coefficient B	Standard Error	Beta B	R	R Square	Semi-Partial Correlation
Forgiveness predicts Interpersonal Rumination		-.291	.048	-.246	.246	.060	-.246
Forgiveness predicts Anxiety		-.264	.058	-.186	.186	.035	-.186
Forgiveness and Interpersonal Rumination predict Anxiety	Forgiveness	-.146	.057	-.103	.376	.141	-.100
	Rumination	.404	.048	.337			.327

FIGURE 5
A mediation analysis examining the effects of forgiveness on anxiety with rumination as
the mediator
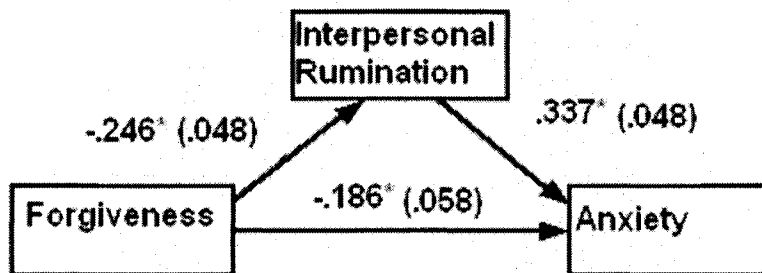
* The coefficients with an asterisk indicate significant standardized Beta weights, and the
coefficients in parentheses indicate the standard error.

Summary

Three regression analysis series were conducted to analyze interpersonal

rumination as a mediator between forgiveness and mental health. Both the direct and

indirect effect of forgiveness on mental health were analyzed

Hypothesis One

It was hypothesized that forgiveness would hold a direct effect on anger, depression, and anxiety. Specifically, forgiveness was expected to predict lower levels of anger, depression, and anxiety. Both zero-order Pearson correlations and regressions were run to test for those relationships. The results of the correlations indicate forgiveness is moderately negatively correlated with anger ($r = -.398$, $p < .01$), depression ($r = -.274$, $p < .01$), and anxiety ($r = -.186$, $p < .01$). The results of the regression analyses further support the hypothesis that forgiveness holds a direct effect on psychological health.

Forgiveness was found to significantly predict anger, $R^2 = .158$, $F(1, 565) = 106.03$, $p < .01$. Further, the relationship between forgiveness and anger was still significant after partialling out the variance attributed by rumination, indicating a direct effect. That is forgiveness accounts for decreases in anger over and above the influence of rumination. The strength of the direct effect of forgiveness on anger is $\beta = -.398$.

Forgiveness was also found to significantly predict depression, $R^2 = .075$, $(F(1, 568) = 46.22$, $p < .01)$. Further, after partialling out the variance attributed by rumination forgiveness remained a predictor of decreases in depression. Forgiveness directly predicts decreases in depression, with the strength of the direct relationship being $\beta = -.274$.

Lastly, forgiveness was found to significantly predict anxiety, $R^2 = .035$, $F(1, 569) = 20.427$, $p < .01$. Further, there is evidence for a direct effect of forgiveness on anxiety as the relationship between forgiveness and anxiety remained significant after taking out the variance attributed by rumination. The strength of the direct effect of forgiveness on anxiety is $\beta = -.186$.

Hypothesis Two

Hypothesis two was supported; interpersonal rumination was found to partially

mediate the relationship between forgiveness and anger, depression, and anxiety. A

series of regression analyses were run to test for this hypothesis.

Interpersonal rumination met the criteria for partial mediation in the relationship

between forgiveness and anger. Firstly, high levels of forgiveness were found to

significantly predict low levels of rumination ($\underline{R}^2$ = .60, $F(1, 569)$ = 36.59, p <.001).

Secondly, high levels of forgiveness were found to significantly predict low levels of

anger ($\underline{R}^2$ = .158, $F(1, 565)$=106.03, p <.01). Thirdly, high levels of rumination were

found to significantly predict high levels of anger ($F(2, 564)$=88.90, p <.01) . Fourthly,

the relationship between forgiveness and anger was less after taking out the variance

attributed by interpersonal rumination (β=-.398 to β=-.326). Finally, the results of the

Sobel test verify the statistical significance of the mediating relationship (z = -4.806, p <

.001). The strength of the indirect relationship is β = - .073.

Interpersonal rumination also met the criteria for partial mediation in the

relationship between forgiveness and depression. Firstly, high levels of forgiveness were

found to significantly predict low levels of rumination ($\underline{R}^2$ = .60, $F(1, 569)$ = 36.59, p

<.001). Secondly, high levels of forgiveness were found to significantly predict low

levels of depression ($\underline{R}^2$ = .075, ($F(1, 568)$=46.22, p <.01). Thirdly, high levels of

rumination were found to significantly predict high levels of depression ($F(2,$

$567)$=103.05, p <.01) . Fourthly, the relationship between forgiveness and depression

was less after taking out the variance attributed by interpersonal rumination (β=-.274 to

β=-.164). Finally, the results of the Sobel test verify the statistical significance of the

mediating relationship (z = -5.421, p < .001). The strength of the indirect relationship is

$\beta = -.111$.

In addition, interpersonal rumination met the criteria for partial mediation in the relationship between forgiveness and anxiety. Firstly, high levels of forgiveness were found to significantly predict low levels of rumination ($\underline{R^2}$ = .60, F(1, 569) = 36.59, p <.001). Secondly, high levels of forgiveness were found to significantly predict low levels of anxiety ($\underline{R^2}$ = .035, F(1, 569) = 20.427, p <.01). Thirdly, high levels of rumination were found to significantly predict high levels of anxiety (F(2, 568) = 46.782, p <.01) . Fourthly, the relationship between forgiveness and anxiety was less after taking out the variance attributed by interpersonal rumination (β=-.186 to β=-.103). Finally, the results of the Sobel test verify the statistical significance of the mediating relationship (z = -4.806, p < .001). The strength of the indirect relationship is β = -.083.

Hypothesis Three

The results do not support hypothesis three. Interpersonal rumination does not account for more of the variance in the forgiveness anxiety relationship. Interpersonal rumination accounts for more of the variance in the forgiveness depression relationship β= -.111 compared to β = -.083 for the forgiveness anxiety relationship.

DISCUSSION

Rumination Mediates Between Forgiveness and Psychological Health

The results of this study lend further credence to Berry et al.'s (in press) finding that rumination mediates the relationship between forgiveness and mental health. In general, rumination appears to exacerbate and maintain negative emotions. Repeatedly

thinking about an offense or perseverating on emotions associated with the offense

worsens existing negative emotions. Although the content of the repetitive thoughts

appears to dictate the type of emotion which is exacerbated, this study demonstrates that

in general ruminating predicts anger, depression, and anxiety. It appears that rumination

partially explains how forgiveness works to improve mental health. Unforgiveness

encourages rumination. When a victim refuses to forgive her offender for a

transgression, she may be more prone to dwell on the offense. Her thoughts may be

comprised of the cognitive aspects of the various emotions elicited by the event (i.e.

anger, depression, or anxiety) or made up of the details about the offense or the offender

themselves. Her focus on the offense may lead to repetitive and intrusive thoughts

stemming from the offense. These repetitive and intrusive thoughts then exacerbate and

maintain a state of psychological ill health (e.g. increases in anger, depression, and

anxiety). Therefore, it appears that one mechanism in which forgiveness works to

improve mental health is by reducing rumination, which in turn reduces negative

emotions (see Figure 1).

FIGURE 1

Possible mechanism of how unforgiveness possibly works to increase emotional distress.
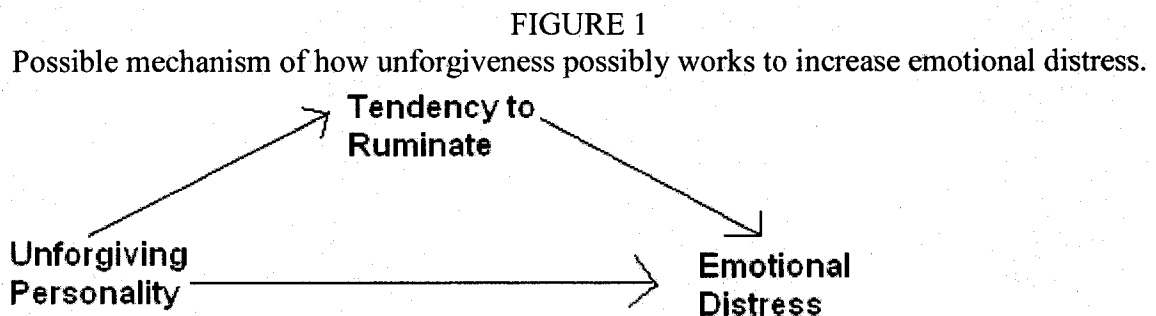
Previous research found that the content of the perseverative cognitions predicted,

which emotion was exacerbated (Berry et al., in press). For example, vengeful

rumination, recurrent revenge focused thoughts, predicted high levels of anger (Berry et

al., in press). Depressive rumination, repetitive self hate cognitions, predicted high levels of depression (Berry et al., in press). As previous research did not illuminate the type of rumination which exacerbates anxiety, a main aim of this study was to illustrate that interpersonal rumination, repetitive thoughts of future interpersonal failure, predicts high levels of anxiety. The results of this study indicate that interpersonal rumination does exacerbate and maintain anxiety. However, interpersonal rumination was found to also exacerbate and maintain anger and depression. Therefore, as there is a clear lack of discriminate validity, it appears that interpersonal rumination is not the missing link in Berry et al's model (in press).

From a methodological perspective, interpersonal rumination may have failed to be the missing link in the Berry et al.'s (in press) model due to problems with the proxy measure. This measure has never been used before and therefore does not have established validity and reliability. It may be that the measure used to assess interpersonal rumination lacked content validity. That is the proxy measure may not have assessed interpersonal rumination, but perhaps a related concept such as low self esteem as it relates to social interactions. In addition to possible problems with the proxy measure, the small effect size of forgiveness on anxiety presented problems. There was very little variance to be explained. The direct effect was so small that it was difficult to assess for an indirect effect. Forgiveness accounted for more of the variance in depression and anger. Therefore, there was more variance to be explained through both the direct and indirect route.

There are numerous reasons from a theoretical perspective why interpersonal rumination is not the missing link in Berry et al's model (in press). Berry et al. (in press)

found that repetitive self hate cognitions mediated the relationship between forgiveness and depression and that revenge focused thoughts mediated the relationship between forgiveness and anger. In both cases, the repetitive thoughts are prominent symptoms of the disorder. However, in the case of interpersonal rumination as the mediator between forgiveness and anxiety, possessing repetitive thoughts of future interpersonal failure is not a prominent symptom of anxiety. It is more likely that repetitive thoughts of a more prominent symptom of anxiety would better mediate the relationship between forgiveness and anxiety. For example, repetitive worrisome thoughts in general might better mediate the relationship between forgiveness and anxiety. Although worry about future interpersonal failure is a component of anxiety, it is a component of a specific anxiety, social phobia.

Secondly, as previously explained interpersonal failure and the fear of future interpersonal failures conjure up numerous emotions depending upon the perception of the offense. The thought of potential future failed interpersonal encounters may induce anger in the victim if the victim feels she/he does not deserve social rejection. However, on the flip side it may produce depression if the person believes he/she is fundamentally flawed and thus does deserve the future rejection. And, thoughts of potential future failed interpersonal interactions may elicit anxiety if the anticipated rejection is viewed as threatening. Therefore, it makes theoretical sense why interpersonal rumination acts as a partial mediator between forgiveness and all three of the negative consequences of holding a grudge.

Interpersonal Rumination: A Mediator between Forgiveness and Psychological Ill Health

The results of this study indicate that individuals prone to unforgiveness tend to ruminate on future interpersonal failure, which is related to higher levels of anger, depression, and anxiety (see Figure 1). Possessing an unforgiving personality style, a tendency to hold onto grudges following offenses, may lead the victim to dwell on the negative consequences of the offense, whereas, forgiveness releases the victim from dwelling on the offense or any negative associations with the offense. By definition, trait forgiveness is a general tendency to respond to an offense by releasing negative emotions, thoughts, and actions toward the offender and replacing them with neutral or positive emotions, thoughts, and actions. According to this definition of trait forgiveness, the opposite of a forgiving personality would involve negative thoughts related to the offense.

In terms of interpersonal rumination, a perceived offense is essentially a failed interpersonal interaction. If the victim is prone to unforgiveness they will centre their attention on the negative aspects of offenses including a focus on the failed interpersonal encounters. Focus on failed interpersonal encounters may lead the victim to worry about future interpersonal failures. A personality style that is inclined to repeatedly worry about future interpersonal failure is the definition of interpersonal rumination. The results of this study indicate that interpersonal rumination is predictive of high levels of anger, depression, and anxiety.

Ruminating on future interpersonal rejection may lead to anger if the anticipated rejection is perceived as offensive and demeaning. Thinking that others will react negatively may motivate feelings of anger and/or a desire to aggress against the potential

offenders, as the victim believes she does not deserve social rejection. The expectation of interpersonal rejection may also elicit feelings of anxiety if the future interpersonal rejection is anticipated to be threatening. The victim may be worried and afraid of rejection, frightened of the potential negative consequences of interpersonal failure. Further, the perceived promise of social rejection may elicit sadness in victims if the rejection is perceived as hurtful. Believing they are doomed to mostly encounter social failure, victims may begin to think they are not worthy of social relations, and that people reject them because they are fundamentally flawed. Typically, this kind of thinking leads to feelings of depression.

Individuals who are prone to forgiveness routinely release all negative thoughts, feelings, and actions toward an offender when interpersonally offended. Therefore, interpersonal rumination does not develop and is not accompanied by a conglomerate of deleterious emotions. Conversely, possessing an unforgiving personality style may lead the victim to ruminate on interpersonal failure. This focus on future potential social failure may elicit a variety of deleterious emotions including anger, anxiety, and depression.

It is also possible that possessing high levels of negative emotions influences an individual's ability to forgive and increases her tendency toward interpersonal rumination. This would create a circle in which unforgiveness leads to high levels of interpersonal rumination and consequent high levels of anger, depression, and/or anxiety, and then high levels of anger, depression, and/or anxiety would reinforce an unforgiving personality and a tendency toward interpersonal rumination (see Figure 6).

FIGURE 6

Possible mechanism of how forgiveness works

Tendency to
Interpersonally
Ruminate

Unforgiving
Personality

Emotional
Distress
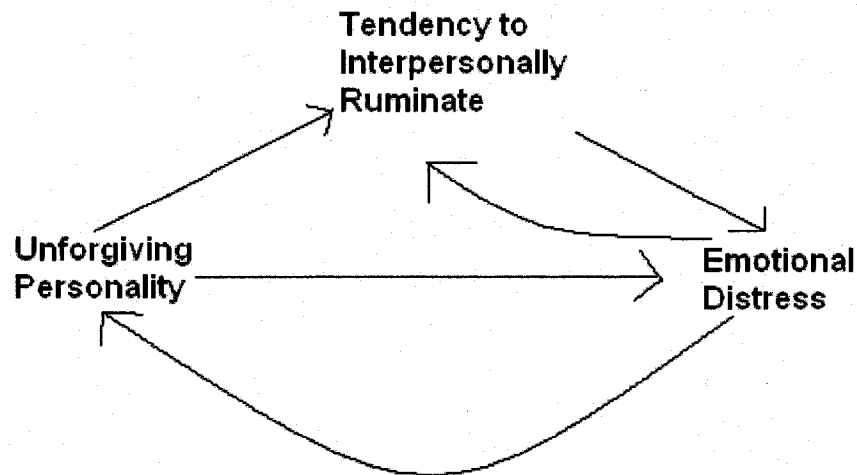
Those who are high in anger, depression, and anxiety may be more likely to

possess unforgiving personalities. In other words, high levels of anger, depression,

and/or anxiety may reduce the individual's likelihood of extending forgiveness after

being offended. Previous research suggests that high levels of anger, depression, and/or

anxiety may cloud an individual's judgments leading to inappropriate attributions to

other's behavior. Research on aggressive individuals has found that they tend to perceive

aggressive intent from other's ambiguous actions (Dodge, 1985). Additionally,

aggressive individuals tend to take into account a limited number of social cues when

deciding the intent of other's behaviors (Dodge, 1985). In general, individuals high in

anger tend to interpret other's behaviors as volitionally vengeful. This may then lead to

low levels of empathy and humility, which are two key components necessary for

forgiveness.

Individuals high in depression are more inclined than non depressed individuals to

misinterpret other's ambiguous actions as hurtful (Bodiford et al., 1990). They are likely

to interpret other's actions as a personal attack against their character. Individuals high

in anxiety are inclined to perceive threat in ambiguous circumstances (Kendall, Kane, Howard, & Siqueland, 1992). This would suggest that both depressed and anxious individuals are more inclined to experience perceived interpersonal offenses. The sheer volume of perceived interpersonal offenses may lead them to grow bitter and refuse to forgive so called "repeated offenses". Future research should examine whether high levels of anger, depression, and anxiety result in and exacerbate existing unforgiving personalities.

Possessing high levels of anger, depression, and/or anxiety may also lead to or exacerbate interpersonal rumination. Previous research has made a clear link between negative emotions and distorted thinking. Cognitive behavioral therapy is constructed around the principle that thoughts influence emotions, which in turn influence thinking patterns. Future research should attempt to partial out the relationship between interpersonal rumination and elevated levels of anger, depression, and anxiety in order to determine if there is reciprocal influence.

Clinically

Although this study utilized an undergraduate sample, the results of this study may be applicable to a clinical population. However, it is possible that the undergraduate population differs in how forgiveness works to improve mental health from a clinical sample. This may be because a clinical population may be more distressed and possess greater hurts than an undergraduate population; thus, forgiveness would work differently in this population. Therefore, future research should attempt to replicate the results of this study in a clinical population; which would provide support for the application of this

study's results to a clinical population. However, it is likely that forgiveness works similarly in both populations.

Therefore, the results of the current study provide preliminary evidence that therapists working with unforgiving clients suffering from elevated anger, depression, and/or anxiety may notice beneficial decreases in these negative emotions through working on reducing and eventually eliminating rumination. As rumination was found to partially explain the relationship between forgiveness and deleterious emotions, forgiveness interventions may benefit from an increased emphasis on addressing repetitive and intrusive maladaptive thought patterns. It is important that therapists become aware that rumination is detrimental for clients prone to unforgiveness. Clients may not report ruminating, thus therapists should inquire about their client's thought patterns. Further, therapists will need to initiate work on reducing rumination, as clients will most likely not be motivated to stop ruminating on their own. Victims often view their rumination as an adaptive coping strategy. Rumination appears to console victims, as they feel mentally rehearsing the event and the accompanying emotions somehow punishes the offender. However, as the offender is unaware of the inner thoughts of the victim this logic is substantially flawed. Further, the results of this study in conjunction with Berry, et al.'s (in press) suggest rumination is psychologically harmful to the victim.

Specifically, the results of this study indicate that interpersonal rumination, repetitive worry about future interpersonal failure, is psychologically harmful. The results of this study indicate that a repetitive focus on future social failure may lead to increases in anger, depression, and anxiety. Therapists working with unforgiving clients should look for the presence of interpersonal rumination. Any repetitive intrusive

thoughts of future interpersonal failure should be addressed. Reducing or eliminating interpersonal rumination in therapy may lead to decreases in anger, depression, and/or anxiety.

One potential benefit from understanding that interpersonal rumination partially explains the connection between forgiveness and improvements in mental health is that inducing forgiveness in chronically unforgiving clients is difficult. It may be that reducing or eliminating rumination is easier. Clients may be more open to working on changing their maladaptive thinking patterns rather than giving up their feelings of bitterness toward their offender. Working on rumination may be an opportunity to both reduce elevated levels of anger, depression, and/or anxiety and increase the client's tendency to extend forgiveness.

Limitations and Future Directions

This study utilized an undergraduate sample comprised of psychology students at a south western Ontario university. Further, the majority of the sample were Caucasian females. Therefore, care must be taken in generalizing these findings to the population at large. It may be that forgiveness works to reduce negative emotions by reducing rumination only in this small sample of individuals.

Another limitation is the sampling employed for the measures. There may be some conceptual overlap between the proxy measure of interpersonal rumination and the measure of trait anxiety. One of the items on the Beck Anxiety Inventory examines the degree of the participant's "fear of the worst happening", which is loosely related to worry over future interpersonal failure (i.e. interpersonal rumination).

Although the proxy measure of interpersonal rumination demonstrated adequate psychometric properties, as it is a proxy measure this scale only approximates interpersonal rumination. Further, its psychometric properties have not been verified in other studies. Therefore, this study merits replication with another instrument assessing interpersonal rumination before firm conclusions should be drawn.

As this study utilized an archival data base, there were restrictions on what could be examined. Only measures that were part of the original data set could be used. As a result, a proxy measure of interpersonal rumination was developed.

Lastly, although the three partial mediation models were significant, prudence should be used in interpreting the results. Rumination was found to be a statistically significant mediator between forgiveness and anger, depression, and anxiety. However, the strength of the indirect effect was weak ranging from $\beta = -.111$ to $\beta = -.073$. Rumination accounted for a limited amount of the variance in the forgiveness and anger, depression, and anxiety relationship. Nonetheless, this study adds to the knowledge base of how forgiveness works to improve mental health by implicating rumination as a mediator between forgiveness and mental health. Replication of the findings is necessary before firm conclusions about the mechanisms of forgiveness can be drawn.

Future research should examine specifically how forgiveness leads to reductions in rumination. Why does relinquishing the negative thoughts, feelings, and behaviors toward the offender lead to decreases in rumination? And, specifically, why would releasing negative thoughts, feelings, and behaviors toward the offender result in decreases in worry over future interpersonal failure? It may be that forgiveness replaces negative rumination with positive rumination. In other words, the victim may stop

ruminating on negative thoughts and feelings associated with the offense but may replace

the repetitive cognitions with forgiveness based ruminations.   Future research should

investigate positive forgiveness based rumination in order to discover if these

ruminations mediate the relationship between forgiveness and good mental health.

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APPENDIX I
Consent Form
                                Consent to Participate in Research

Project Title: Personality, Health, and Parental Characteristics

Principle Investigators: Michelle Carroll, M.A., Kenneth Hart, Ph.D., Stephen Hibbard, Ph.D.
Student co-investigators: Patricia Brusco, Laurie Gingrich, Elizabeth Malone-D'Agnolo, B.A.

After reading each point, indicate that you understand each point by clicking on the box.

At the end of the form, if you agree to participate, also click on the "I consent to Participate" button. If you have any questions contact the resaerchers via e-mail:
lifestyle@uwindsor.ca

1. General purpose.
For the past few years, studies have been conducted attempting to show how personality and health are related to various parental patterns of drinking habits and mood states. The purpose of the present study is to further that research.

☐ I understand

2. Procedures.
For the purpose of this study I will be asked to complete a number of questionnaires pertaining to my personality and health. I will also be asked to complete some questions about my recollection of my parents drinking patterns and their mood states.

☐ I understand

3. Risks.
I understand that there are only minimal risks involved in my reading and responding to these questions. A few of the responses may cause temporary embarrassment or may remind me of acts or situations I would rather not recall. However, most of these questions or ones very much like them have been responded to by hundreds of people previously without appreciable consequences. If, after responding to the items in these questionnaires, you experience any unpleasant emotions and feel the need to talk to someone about these emotions, help can be had through the Student Counselling Centre (2nd floor of the CAW centre 253-3000 x4616). If you prefer to seek help elsewhere, a

list of resources is available to you through the Student Counselling Centre or through the Psychological Services Center.

☐ I understand

4. Benefits and compensation.

The benefits to you for participating in this study is that you will see what it is like to answer questions that are involved in psychological research. You will also receive 3 bonus marks for your participation. The benefits to society is that the research will hopefully advance our knowledge of the relations among some personality factors, some parental characteristics, and health outcomes. There is no payment for participation.

☐ I understand

5. Confidentiality.

I understand that my ratings will be completely confidential. There will be no recording of my name or any information that identifies me in any way with my responses. The results of the study showing group data may be later published.

☐ I understand

6. Results of research.

I understand that the results of the research will be available to me by consulting the Participant Pool Bulletin Board in Chrysler Hall South.

☐ I understand

7. Participation and withdrawal.

I understand that my participation in the process is completely voluntary and that I will be able to withdraw at any time from the study without consequences of any kind. The investigator may withdraw you from this research if circumstances arise which warrant doing so.

☐ I understand

8. Rights of research subjects.

You may withdraw your consent at any time and discontinue participation without penalty. I understand that this study has been reviewed and received ethics clearance through the University of Windsor Research Ethics Board.

☐ I understand

If you have questions regarding your rights as a research subject, contact:

Research Ethics Co-ordinator Telephone: 519-253-3000, # 3916
University of Windsor E-mail: ethics@uwindsor.ca
Windsor, Ontario
N9B 3P4

Click here to indicate that you voluntarily consent to participate in the research project.

APPENDIX II
The Heartland Forgiveness Scale

From each of the following statements, mark the number (from the scale below) that best describes how you **currently** react when bad things happen. There is no right or wrong answers. Please be as honest as possible.

1	2	3	4	5	6	7
Almost Always False of me		more often false of me		more often true of me		almost always true of me

7.	I continue punishing a person who has done something that I think is wrong.	
8.	With time, I am understanding of others for the mistakes they've made.	
9.	I continue to be hard on others who have hurt me.	
10.	Although others have hurt me in the past, I've eventually been able to see them as good people.	
11.	If others mistreat me, I continue to think badly of them.	
12.	When someone disappoints me, I can eventually move past it.	

APPENDIX III
Beck Anxiety Inventory

Below is a list of common symptoms of anxiety. Please carefully read each item in the list. Indicate how much you have been bothered by each symptom during the PAST WEEK, INCLUDING TODAY, by clicking in the appropriate circle next to each symptom.

1.		Numbness or tingling	Not at all Mildly Moderately Severely
2.		Feeling hot	Not at all Mildly Moderately Severely
3.		Wobbliness in legs	Not at all Mildly Moderately Severely
4.		Unable to relax	Not at all Mildly Moderately Severely
5.		Fear of the worst happening	Not at all Mildly Moderately Severely
6.		Dizzy or lightheaded	Not at all Mildly Moderately Severely
7.		Heart pounding or racing	Not at all Mildly Moderately Severely
8.		Unsteady	Not at all Mildly Moderately Severely
9.		Terrified	Not at all Mildly Moderately Severely
10.		Nervous	Not at all Mildly Moderately Severely
11.		Feeling of choking	Not at all Mildly Moderately Severely

12.	Hands trembling	Not at all Mildly Moderately Severely
13.	Shaky	Not at all Mildly Moderately Severely
14.	Fear of losing control	Not at all Mildly Moderately Severely
15.	Difficulty breathing	Not at all Mildly Moderately Severely
16.	Fear of dying	Not at all Mildly Moderately Severely
17.	Scared	Not at all Mildly Moderately Severely
18.	Indigestion or discomfort in abdomen	Not at all Mildly Moderately Severely
19.	Faint	Not at all Mildly Moderately Severely
20.	Face flush	Not at all Mildly Moderately Severely

APPENDIX IV
Beck Depression Inventory

This questionnaire consists of 21 groups of statements. Please read each group of statements carefully, and then pick out the one statement in each group that best describes the way you have been feeling during the past two weeks, including today. Click beside the statement you have picked. Be sure that you do not choose more than one statement for any group, including Item 16 (Changes in Sleeping Pattern) or Item 18 (Changes in Appetite).

1.	Sadness	I do not feel sad
		I feel sad much of the time
		I am sad all the time
		I am so sad or unhappy that I can't stand it
2.	Pessimism	I am not discouraged about my future
		I feel more discouraged about my future than I used to be
		I do not expect things to work out for me
		I feel my future is hopeless and will only get worse
3.	Past Failure	I do not feel like a failure
		I have failed more than I should have
		As I look back I see a lot of failures
		I feel I am a total failure as a person
4.	Loss of Pleasure	I get as much pleasure as I ever did from the things I enjoy
		I don't enjoy things as much as I used to
		I get very little pleasure from the things I used to enjoy
		I can't get any pleasure from the things I used to enjoy
5.	Guilty Feelings	I don't feel particularly guilty
		I feel guilty over many things I have done or should have done
		I feel quite guilty most of the time
		I feel guilty all of the time
6.	Punishment Feelings	I don't feel I am being punished
		I feel I may be punished
		I expect to be punished
		I feel I am being punished
7.	Self-Dislike	I feel the same about myself as ever
		I have lost confidence in myself
		I am disappointed in myself
		I dislike myself
8.	Self-Criticalness	I don't criticize or blame myself anymore than usual
		I am more critical of myself than I used to be
		I criticize myself for all of my faults
		I blame myself for everything bad that happens
9.	Suicidal Thoughts or Wishes	I don't have any thoughts of killing myself
		I have thoughts of killing myself but I would not carry them out
		I would like to kill myself
		I would kill myself if I had the chance
10.	Crying	I don't cry any more than I used to
		I cry more than I used to
		I cry over every little thing

		I feel like crying but can't
11.	Agitation	I am no more restless or wound up than usual
		I feel more restless or wound up than usual
		I am so restless or agitated that it's hard to stay still
		I am so restless or agitated that I have to keep moving or doing something
12.	Loss of Interest	I have not lost interest in other people or activities
		I am less interested in other people or things than before
		I have lost most of my interest in other people or things
		It's hard to get interested in anything
13.	Indecisiveness	I make decisions about as well as ever
		I find it more difficult to make decisions than usual
		I have much greater difficulty in making decisions than I used to
		I have trouble making any decisions
14.	Worthlessness	I do not feel I am worthless
		I don't consider myself as worthwhile and useful as I used to
		I feel more worthless as compared to other people
		I feel utterly worthless
15.	Loss of Energy	I have as much energy as ever
		I have less energy than I used to have
		I don't have enough energy to do very much
		I don't have enough energy to do anything
16.	Change in Sleeping Pattern	I have not experienced any changes in my sleeping patterns
		I sleep somewhat more than usual
		I sleep somewhat less than usual
		I sleep a lot more than usual
		I sleep a lot less than usual
		I sleep most of the day
		I wake up 1 to 2 hours early and can't get back to sleep
17.	Irritability	I am no more irritable than usual
		I am more irritable than usual
		I am much more irritable than usual
		I am irritable all the time
18.	Changes in Appetite	I have not experienced any change in my appetite
		My appetite is somewhat less than usual
		My appetite is much less than before
		I have no appetite at all
		My appetite is somewhat greater than usual
		My appetite is much greater than usual
		I crave food all the time
19.	Concentration Difficulty	I can concentrate as well as ever
		I can't concentrate as well as usual
		It's hard to keep my mind on anything for very long
		I find I can't concentrate on anything
20.	Tiredness or Fatigue	I am no more tired or fatigued than usual
		I get tired or fatigued more easily than usual

I am too tired or fatigued to do a lot of the things I used to do
I am too tired or fatigued to do most of the things I used to do

21.   Loss of Interest in Sex   I have not noticed any recent change in my interest in sex
I am less interested in sex than I used to be
I am much less interested in sex now
I have lost interest in sex completely

APPENDIX V
Trait Anger Scale

Read each of the following statements that people have used to describe themselves, and then click on the appropriate circle to indicate how you generally feel or react. There are no right or wrong answers. Do not spend too much time on any one statement. Mark the answer that best describes how you generally fell or react.

I am quick tempered	◌ Almost never ◌ Often ◌ Sometimes ◌ Almost always
I have a fiery temper	◌ Almost never ◌ Often ◌ Sometimes ◌ Almost always
I am a hotheaded person	◌ Almost never ◌ Often ◌ Sometimes ◌ Almost always
I get angry when I'm slowed down by others' mistakes	◌ Almost never ◌ Often ◌ Sometimes ◌ Almost always
I feel annoyed when I am not given recognition for doing good work	◌ Almost never ◌ Often ◌ Sometimes ◌ Almost always
I fly off the handle	◌ Almost never ◌ Often ◌ Sometimes ◌ Almost always
When I get mad, I say nasty things	◌ Almost never ◌ Often ◌ Sometimes ◌ Almost always
It makes me furious when I am criticized in front of others	◌ Almost never ◌ Often ◌ Sometimes ◌ Almost always
When I get frustrated, I feel like hitting someone	◌ Almost never ◌ Often ◌ Sometimes ◌ Almost always
I feel infuriated when I do a good job and get a poor evaluation	◌ Almost never ◌ Often ◌ Sometimes ◌ Almost always

APPENDIX VI
Proxy Measure of Interpersonal Rumination

Questionnaire #3 (Relationship Scale Questionnaire (RSQ) Items)
Please enter "0" for True and "1" for False on the scantron sheet.

B49.	5.	I worry that I will be hurt if I allow myself to become too close to others.
B53.	9.	I worry about being alone.
B55.	11.	I often worry that romantic partners don't really love me.
B57.	13.	I worry about others getting too close to me.
B60.	16.	I worry that others don't value me as much as I value them.
B65.	21.	I often worry that romantic partners won't want to stay with me.
B67.	23.	I worry about being abandoned.
B72.	28.	I worry about having others not accept me.

APPENDIX VII
Debriefing Form

Dear Participant Pool Student,

Thanks so much for participating in our Lifestyle study on Personality, Health, and Parental Characteristics. This study had many purposes, but they really center around looking at how the characteristics of some types of parents may effect their offspring. In this case, you were the "offspring", and our study will relate what you told us about yourselves to what you told us about your parents. In this particular study, we were especially interested in how parental patterns of depression and parental drinking patterns influenced their offspring.

We are collecting a broad variety of information on the offspring, ranging from emotional characteristics to health patterns to some aspects of spirituality. We will be able to say something about, for example, whether parental depression or its opposite influences how often the offspring get sick. We will also be able to speak about whether these parental characteristics influence emotional factors among the offspring and even the extent to which it might influence offspring willingness to forgive.

Parental influences on their children are generally transmitted in two ways, through genetics and through environmental influences. In our study, unfortunately, we cannot pull apart the influences of heredity (genetics) from those of environment. In order to do that psychologists have to have access to many members of the same family. However, in our study we will be able to differentiate influences of drinking from those of mood (depression) because we gathered data on both topics from you. In addition, we will be able to investigate influences when both kinds of parental characteristics are involved.

Thank you,

Lifestyle Research Group