

Loren L. Toussaint • Everett L. Worthington, Jr.  
David R. Williams  
Editors

# Forgiveness and Health

Scientific Evidence and Theories Relating  
Forgiveness to Better Health

 Springer

*Editors*

Loren L. Toussaint  
Department of Psychology  
Luther College  
Decorah, IA, USA

Everett L. Worthington, Jr.  
Department of Psychology  
Virginia Commonwealth University  
Richmond, VA, USA

David R. Williams  
Harvard T.H. Chan School of Public Health  
Boston, MA, USA

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# Chapter 16

## Forgiveness and Health in Nonmarried Dyadic Relationships

Jody L. Davis, Jeffrey D. Green, Chelsea A. Reid, Jaclyn M. Moloney,  
and Jeni Burnette

Transgressions occur in all types of relationships, romantic or otherwise. Any dyadic relationship characterized by interdependence inevitably provides opportunities for a partner's behavior to offend, setting the stage for the granting or withholding of forgiveness. In the context of nonmarried dyadic relationships, forgiveness research primarily has focused on dating relationships, with comparatively sparse research on other relationships such as friendships or work relationships. Across these relationship contexts, research elucidates a range of physical, mental, and relationship health benefits of forgiveness that largely parallels benefits present in the context of marital relationships. Based upon existing research, it is unclear the extent to which health implications of forgiveness may vary depending upon the distal context of the forgiveness – the type of relationship in which the forgiveness occurs (e.g., friendships vs. dating relationships vs. marital relationships); however, characterizing relationships in terms of their proximal processes – psychological mechanisms underlying forgiveness – may be a fruitful strategy for exploring differences in health outcomes. Three foundational relationship theories (investment model of commitment, evolutionary theory, and attachment theory) provide a framework for identifying important proximal moderators of the link between forgiveness and health that may supersede relationship type and provide a blueprint for future research.

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J.L. Davis (✉) • J.D. Green • J.M. Moloney  
Virginia Commonwealth University, 820 W Franklin St, Richmond, VA 23284, USA  
e-mail: [jldavis@vcu.edu](mailto:jldavis@vcu.edu); [jdgreen@vcu.edu](mailto:jdgreen@vcu.edu); [moloneyjm@vcu.edu](mailto:moloneyjm@vcu.edu)

J. Burnette  
North Carolina State University, 640 Poe Hall, Box 7650, Raleigh, NC 27695, USA  
e-mail: [jlburne5@ncsu.edu](mailto:jlburne5@ncsu.edu)

C.A. Reid  
College of Charleston, 66 George Street, Charleston, SC 29424, USA  
e-mail: [reidca@cofc.edu](mailto:reidca@cofc.edu)

Forgiveness involves transforming negative thoughts, feelings, and behavior towards a perpetrator into more positive thoughts, feelings, and behavior (e.g., McCullough, Fincham, & Tsang, 2003). From this perspective, forgiveness is intraindividual, prosocial change toward a perpetrator (McCullough, Pargament, & Thoresen, 2000) that involves reducing motivation to retaliate as well as increasing motivation for conciliation and goodwill. Trait and state level forgiveness both are linked to health. *Trait forgiveness* transcends relationships, time, and situations and is defined as a dispositional tendency to grant forgiveness, whereas *state forgiveness* unfolds within the context of specific transgressions and perpetrators.

## Three Domains of Health

**Physical Health** In the aftermath of transgressions, forgiveness can protect physical health by reducing stress and rumination. Cardiovascular reactivity can be associated with physical health; the ability to quickly return to baseline blood pressure and heart rate levels after a stressor is an indication of physiological hardiness and the ability to cope successfully with stress (Dienstbier, 1989). Among individuals who discussed a past conflict that they had with a friend, parent, or romantic partner, greater trait forgiveness was associated with lower blood pressure, and greater state forgiveness was associated with lower blood pressure as well as lower heart rate (Lawler et al., 2003). In addition, failure to forgive was associated with a longer period of cardiovascular reactivity, particularly among individuals who were lower in trait forgiveness or who discussed a conflict with a parent (vs. friend or romantic partner). Failure to forgive also was associated with stress and hostility as well as self-reported illness. A similarly-designed study took into account attachment style (i.e., the quality of the emotional bond between individuals) and revealed that securely (vs. insecurely) attached individuals exhibited greater trait forgiveness and state forgiveness (Lawler-Row, Younger, Piferi, & Jones, 2006). In addition, insecurely (vs. securely) attached individuals had greater diastolic blood pressure and mean arterial pressure during the recovery period as well as greater systolic blood pressure during the discussion and recovery periods.

Importantly, not all forgiveness may buffer equally against stress. Motivations to forgive can focus on obligation (yielding to pressure from others such as a religious authority to forgive) or on love (Huang & Enright, 2000). Individuals who forgave friends, spouses, or coworkers out of obligation (vs. love) held onto more residual anger and had higher blood pressure while describing an interpersonal conflict. In a related vein, a rare investigation of forgiveness and health in a workplace setting (Cox, Bennett, Tripp, & Aquino, 2012) validated five motives for forgiving and found that forgiveness does not always correlate positively with reduced stress and increased health. For example, those who forgave because it was the morally correct thing to do experienced less stress (but not better health),

whereas those who forgave because they felt they had no other alternative (given the nature of the workplace relationship) had greater stress and worse physical health. These different motivations may relate to Worthington's (2003) decisional versus emotional forgiveness; this is a particularly promising area for future investigation.

Other research has more explicitly examined the role of stress in the link between forgiveness and health. Stress activates the neural, neuroendocrine, and neuroendocrine-immune mechanisms that collectively are termed the *allostatic systems*. When allostatic systems are overstimulated, the condition is referred to as high allostatic load (McEwen, 2004). Impaired immunity, obesity, and atrophy of nerve cells in the brain are some of the physical consequences of high allostatic load from chronic stress. Conflict in close relationships may be a particularly toxic source of stress, but forgiveness can protect against the deleterious effects of conflict. For example, college students recalled being hurt or betrayed by a close friend or relationship partner and reported their stress, symptoms of physical illness, and trait forgiveness and state forgiveness (Lawler et al., 2005). Those who reported greater forgiveness – particularly greater state forgiveness – reported better health. Moreover, the link between state forgiveness and health was partially accounted for by reduced stress, and the link between trait forgiveness and health was fully accounted for by reduced stress. Forgiveness appears to protect physical health in a manner beyond cardiovascular reactivity by reducing longer-term stress; “letting go” via forgiveness appears to entail unloading a stress burden.

Additional research has examined amount of salivary cortisol as a measure of stress reactivity. Research using cortisol measurement has revealed that acute physiological stress is associated with poorer quality romantic relationships. Individuals in happy or unhappy romantic relationships thought about typical interactions with their partners, and those in unhappy relationships exhibited increased cortisol production (Berry & Worthington, 2001). Moreover, individuals who were higher in trait anger and lower in trait forgiveness were more likely to report being in lower quality relationships, which accounted for their stress reactivity. Other research has revealed that cortisol is associated with a tendency to ruminate about a past transgression (McCullough, Orsulak, Brandon, & Akers, 2007); after interpersonal transgressions, victims often ruminate. To the extent that individuals reported having ruminated about a transgression a great deal during the previous two weeks, their cortisol reactivity levels were higher. Rumination also plays a role in the link between both state forgiveness and trait forgiveness and sleep quality. Individuals who were more forgiving of a transgression reported less anger rumination, which in turn predicted less negative affect and ultimately better sleep quality (Stoia-Caraballo et al., 2008). Thus, both relationship quality and the tendency to ruminate were associated with stress reactivity and healthy behavior.

Other research has used alternative measures of stress. In a particularly well-designed study, individuals imagined unforgiving responses to past transgressions (e.g., betrayal of trust, lies) as well as forgiving responses to the same transgressions several times for 16 s each (Witvliet, Ludwig, & Vander Laan, 2001). Their physiological responses were continuously measured throughout the imagery and recovery periods. While imagining unforgiving responses, individuals experienced

greater facial tension at the brow muscle region, greater sympathetic nervous system arousal, and greater cardiovascular reactivity. These results extended into the recovery period, suggesting that the effects of not forgiving take some time to quell.

In summary, when it comes to physiological processes often associated with physical health, there are protective effects of forgiveness and reactive effects of unforgiveness. The extent to which individuals who experience transgressions in non-marital close relationships are likely to experience a cascade of unforgiveness, stress, and negative health outcomes depends upon individual differences (e.g., attachment style, tendency to ruminate, level of trait forgivingness), the nature of the forgiveness (e.g., love vs. obligation), and relationship quality.

**Mental Health** Forgiveness also is linked to mental health. The vast majority of research on forgiveness and mental health in nonmarried dyads has examined negative outcomes of unforgiveness. That is, most work on mental health has focused on clinical diagnoses or subclinical symptoms, particularly symptoms regarding anxiety disorders (e.g., post-traumatic stress disorder) and depression. Only a few have addressed potential positive benefits of forgiveness such as subjective well-being.

An investigation of infidelity in dating relationships (Kluwer & Karremans, 2009) found that unforgiving motivations (i.e., revenge and avoidance) were associated with more negative affect and less positive affect. Importantly, this link was stronger when individuals were highly committed to the unfaithful other. In another study, individuals imagined forgiveness and unforgiveness (Witvliet et al., 2001) and reported their feelings of anger, sadness, arousal, empathy, and perceived control during each imagery period. When imagining unforgiveness (vs. forgiveness), they experienced greater anger, sadness, and arousal, but less empathy and less control. Though it is unclear how brief imagery relates to long-term health, such reactions may occur immediately after a transgression as well as later when the transgression is recalled.

The link between state forgiveness and depressive symptoms has been studied in undergraduate women who had experienced abuse in their romantic relationship, and undergraduate women and men who had experienced a recent conflict or breakup in their relationship (Ysseldyk, Matheson, & Anisman, 2009). Appraisals of threat and of control accounted for the link between forgiveness and depressive symptoms in both samples, perhaps because forgiveness facilitates a reappraisal of past transgressions and perpetrators. That is, unforgiveness was associated with greater depressive symptoms in both samples, and this was partially accounted for by appraisals of reduced control and greater threat. Such appraisals have a storied history in research on stress and health (e.g., Strelan & Covic, 2006; Worthington, 2006; Worthington & Scherer, 2004).

Unforgiveness appears to be related to anxiety symptoms in addition to depressive symptoms. One study examined college students who had experienced significant traumas (e.g., sexual assault, childhood abuse; perpetrators included dating partners and friends but also family members and strangers) and subsequently felt

extreme fear, helplessness, or powerlessness (Orcutt, Pickett, & Pope, 2008). To the extent that individuals forgave the perpetrator, they experienced fewer PTSD symptoms. In a longitudinal study of a similar set of variables, forgiveness of a transgression at one time period reduced distress (i.e., depressive symptoms, anxiety, stress) at a second time period (36 weeks later on average; Orcutt, 2006). Given that individuals tend to report a linear decline in unforgiveness in the weeks following relational transgressions (McCullough et al., 2003), it seems possible that the simple passage of time reduced distress symptoms, which then led to increased forgiveness.

Forgiveness interventions allow for stronger causal conclusions regarding the effect of forgiveness on health outcomes (for a review see Worthington, Jennings, & DiBlasio, 2010). One study of college women who had been seriously wronged in a romantic relationship (e.g., 50 % reported infidelity, 38 % emotional or verbal abuse, 24 % physical abuse or threat) randomly assigned women to one of two forgiveness interventions (secular vs. religious, but no differences were found between these two intervention types) or a control wait-list (Rye & Pargament, 2002). The interventions consisted of six weekly, 90-min sessions. Although no significant differences were found on some negative affect items such as anxiety and hostility, the interventions did lead to somewhat fewer depressive symptoms, and, notably, higher ratings of existential well-being. Another study of individuals who reported transgressions by coworkers randomly assigned individuals to forgiveness training or job satisfaction training. The forgiveness intervention consisted of social motivation training designed to encourage victims to analyze their perceptions of a transgression. Those who experienced the forgiveness intervention reported improved self-image (Struthers, Dupius, & Eaton, 2005). Both of these studies included rare assessments of positive psychological functioning. Outside the context of marital relationships, there is modest research supporting the efficacy of other forgiveness interventions on health outcomes (e.g., Coyle & Enright, 1997; Rye et al., 2005). The practical limitations of laborious interventions invite research on briefer (e.g., one-session, online) interventions.

In summary, research on nonmarital dyads has addressed forgiveness of a variety of transgressions, particularly serious transgressions (e.g., infidelity). However, operationalizations of mental and emotional health largely have focused on subclinical symptoms of anxiety and depression. Very few have assessed positive outcomes such as subjective well-being or hardiness. (A recent meta-analysis by Riek and Mania (2012) of outcomes of forgiveness—examining all relationship types—confirmed that forgiveness reduces depression, anxiety, stress and negative affect and increases life satisfaction and positive affect.) Forgiveness, at least of serious transgressions, reduces anxiety and depressive symptoms. However, future research on these populations should investigate mild transgressions, study friendships and work relationships in particular, and assess a wider variety of positive mental health outcomes. For example, might forgiveness foster increased resilience, gratitude, or savoring in particular contexts? That is, would a habit of forgiving others lead to less reactivity when experiencing future offenses, or even gratitude for the relationship in spite of inevitable conflicts? Additional experimental work, including different types

of interventions, also is necessary. Finally, mediators of the link between forgiveness and mental health should continue to be studied.

**Relationship Health** In addition to contributing to physical and mental health, forgiveness also affects relationship health. Forgiveness of a friend or romantic partner is linked to a stronger likelihood of resolving a betrayal (Hannon, Rusbult, Finkel, & Kumashiro, 2010) and maintaining rather than terminating the relationship (Morse & Metts, 2011). Relationship stability likely is enhanced by several post-forgiveness pro-relationship responses by perpetrators and victims. For example, individuals who recalled a past transgression that they had forgiven (vs. not forgiven) were more likely to sacrifice (i.e., eschew valued activities) for their partner, and they were more likely to cooperate with their partner on a social task. Similarly, individuals who recalled a forgiven (vs. unforgiven) transgression engaged in greater levels of accommodation (i.e., inhibiting negative impulses and responding constructively rather than destructively following a partner's destructive act). That is, individuals were more likely to respond to hypothetical scenarios in which their partner engaged in a destructive behavior (e.g., "the other suddenly yells at you") by endorsing constructive (e.g., "you think 'never mind,' probably the other had a bad day") rather than destructive (e.g., "you yell back at the other") actions (Karremans & Van Lange, 2004).

Forgiveness of transgressions also predicts greater relationship satisfaction (Braithwaite, Selby, & Fincham, 2011; Wieselquist, 2009). Couples (whose marital status was not indicated) who reported an emotional injury in their relationship and then underwent an emotion-focused couple's therapy intervention for resolving emotional injuries showed improvements in trust and satisfaction compared to wait-list participants (Greenberg, Warwar, & Malcolm, 2010). Other research revealed that to the extent that romantic partners had greater levels of trait forgiveness, they reported greater relationship satisfaction due to exerting greater relationship effort and experiencing less negative conflict. In other words, individuals who tended to be more forgiving were more likely to regulate their behavior with the goal of enhancing relationship quality by engaging in less negative and more positive communication. These behaviors in turn produced greater levels of relationship satisfaction (Braithwaite et al., 2011). Interestingly, forgiveness not only promotes greater relationship satisfaction for the victim, but for the perpetrator as well. Being forgiven by a romantic partner bolstered perpetrators' trust in the partner and ultimately led to greater relationship satisfaction on the part of the perpetrator (Wieselquist, 2009).

Where relationship satisfaction goes, relationship commitment typically follows; thus, it is unsurprising that forgiveness also predicts relationship commitment. In a longitudinal study examining severe transgressions, unforgiveness of a dating partner resulted in a decline in relationship commitment, but forgiveness attenuated the decline (Ysseldyk & Wohl, 2012). Similarly, in research examining the relationship over time among three subtypes of forgiveness and relationship commitment, undergraduates reported increased levels of closeness and commitment to the perpetrator to the extent that they reported less avoidance and revenge and



more benevolence (Tsang, McCullough, & Fincham, 2006). In addition, when victims forgave the perpetrator, perpetrators reported increased commitment to the relationship, demonstrating again that forgiveness benefits relationship health for both parties (Wieselquist, 2009).

In summary, forgiveness yields protective benefits by promoting resolution of betrayals and pro-relationship processes such as accommodation, willingness to sacrifice, and positive communication. Ultimately, forgiveness enhances relationship trust, satisfaction, commitment, and relationship stability.

**Linking Domains of Health** Most research has examined only one of the types of health reviewed (i.e., physical, mental, or relationship health); however, these different types of health obviously are intertwined. For example, relationship health positively influences both physical and mental health in numerous ways, though the relation may be bidirectional in particular instances (e.g., anxiety disorder symptoms affecting relationship quality), and there may be occasional tradeoffs (e.g., forgiving when it is less warranted may improve relationship health but reduce mental health; Luchies, Finkel, McNulty, & Kumashiro, 2010). Some research indicates that post-forgiveness intrapersonal markers of health (e.g., psychological well-being) are in part due to interpersonal markers of health (e.g., relationship quality). For example, trait forgivingness was associated with interpersonal adjustment (i.e., ability to establish positive relationships with others and receive support), which in turn predicted psychological well-being (i.e., lower depression and greater positive affect, optimism, and self-efficacy; Tse & Yip, 2009). Future work should address the integration of these domains of health, but should do so within a solidly grounded theoretical context. The next section recommends three particularly promising theoretical orientations to guide future research.

### Three Theories to Guide Research

Are the predictors and consequences of forgiveness different in friendships and nonmarried romantic relationships relative to married relationships? Generally, research examining links between forgiveness and health has revealed parallel findings whether forgiveness is examined in the context of friendship, nonmarried romantic relationships, or married relationships, and because researchers tend not to report direct comparisons among relationship types (and often do not even report the relationship type of their research participants), no meta-analysis has addressed the question of whether there are relationship type effects. Nevertheless, a more productive approach may be to consider three relationships theories—investment model of commitment, attachment theory, and evolutionary theory—that can provide theory-based insight into the likely nature of any relationship-relevant differences. Put another way, these relationship theories proffer proximal explanations for forgiveness-health effects that likely are more powerful and theoretically

rich compared to examining the more distal context of relationship type (e.g., married vs. not).

**Investment Model of Commitment** According to the investment model of commitment (Rusbult, 1980), individuals who have high satisfaction (i.e., benefits received in the relationship), high investments (i.e., resources tied to the relationship), and low alternatives (i.e., options for receiving benefits without the current relationship) experience greater commitment to their relationship, which is conceptualized as a combination of psychological attachment, long-term orientation, and intent to persist in the relationship. A meta-analysis revealed that the three theorized bases robustly predict commitment across a variety of interpersonal relationships including romantic relationships (marital, dating, exclusive, nonexclusive, homosexual, heterosexual, short duration, and long duration) as well as friendships (Le & Agnew, 2003). Importantly, to the extent that individuals are committed to their relationship, they are likely to engage in a host of relationship maintenance behaviors such as forgiveness (Finkel, Rusbult, Kumashiro, & Hannon, 2002). Future research could examine the extent to which variations in the bases of commitment link to forgiveness and associated health outcomes.

For example, individuals' level of investments in their relationship could influence the likelihood of forgiving their partner and associated health outcomes. Investments can be tangible (e.g., a shared home mortgage) or intangible (e.g., sacrifices made for the partner). Legal marriage and its associated tangible investments may lead married couples to persist in a relationship even in the presence of unforgiveness of severe transgressions, whereas nonmarried couples may be quicker to leave such a relationship. It seems plausible that such persistence could result in a detrimental cumulative effect of stress due to unforgiveness. In addition, individuals who are prevented from marrying (e.g., homosexual couples in certain states) may consequently have fewer tangible investments in a relationship or their investments may be less powerful predictors of commitment (Lehmiller, 2010) and thus forgiveness and associated health outcomes. In addition, the extent to which commitment and therefore forgiveness is driven by tangible versus intangible investments could have varying implications for health outcomes.

In addition, the extent to which individuals perceive that they have high quality alternatives to their current relationship may affect the likelihood of forgiving their partner and experiencing corresponding health outcomes. For example, when individuals are dependent on their partner for their well-being and perceive that they would be unable to meet their needs without the partner, the partner has corresponding greater power in the relationship. Such a dynamic could lead individuals to persist in relationships even when their partners transgress and are not forgiven, and such situations seem likely to be particularly stressful and unhealthy for individuals who feel trapped in a relationship due to lack of alternatives. In addition, whereas most individuals have a primary and exclusive romantic relationship, they tend to have a network of friends. Therefore, it is likely that individuals would perceive greater quality of alternatives to their friendships than to

their romantic relationships, and there are likely to be fewer negative health effects of unforgiveness to the extent that the benefits received from one friendship can be replaced by others. Relatedly, the degree to which individuals are dependent on friends may be affected by whether they are in a romantic relationship; relationship experiences with a best friend predicted individuals' happiness only when they did not have a romantic partner (Demir, 2010). In summary, examining the bases of commitment to a particular relationship could predict the likelihood of forgiveness as well as potential health effects of forgiveness and unforgiveness.

**Evolutionary Theory** An evolutionary perspective on forgiveness suggests that an optimally functioning forgiveness system selectively processes information that enables adaptive decisions that, under ancestral conditions, would have led to fitness-maximizing trade-offs (Duchaine, Cosmides, & Tooby, 2001). That is, individuals would consider the trade-off between the fitness-enhancing value of deterrence (e.g., revenge) and the potential value of benevolence (e.g., forgiveness). The trade-off should, on most occasions, lead to fitness-enhancing resources. Specifically, an evolved forgiveness system examines information relevant to estimating (a) exploitation risk, or the probability of incurring costs to oneself in the future; and (b) relationship value, or the probability of fitness gains for oneself from re-establishing or continuing an association with the perpetrator (Burnette, McCullough, Van Tongeren, & Davis, 2012). After weighing the exploitation risk and relationship value, an individual's forgiveness system should generate a subjective "forgiveness index," which indicates whether forgiveness is an adaptive decision (Petersen, Sell, Tooby, & Cosmides, 2010). This is not to imply that the process is fully logical or even fully conscious; these assessments could be made in a more intuitive or heuristic and less than fully conscious manner. In summary, factors that affect *exploitation risk* and *relationship value* should be weighed most heavily and considered most important in making decisions to forgive and in considering the outcomes of such forgiveness.

This evolutionary approach to forgiveness can be used as a building block for future inquiry into the health consequences of forgiveness in different types of relationships. For example, relationship value may be greater in romantic relationships relative to friendships such that holding a grudge against a dating partner would be more costly to health. In addition, if individuals are inclined to forgive even if exploitation risk remains and/or the relationship holds little or no value to them, then forgiveness could be costly. Indeed, forgiving a perpetrator in the absence of amends (a signal that future exploitation risk is high) erodes self-respect and self-concept clarity (Luchies et al., 2010). Forgiving a perpetrator who has not signaled that the victim will be safe and valued in future interactions could influence health outcomes in a similar fashion. Future inquiry into health consequences of forgiveness could benefit from an investigation examining relationship value and exploitation risk and subsequent physical, emotional, and relationship health outcomes. For example, although forgiveness when value is low and exploitation is

high may be costly to the individual in terms of mental health outcomes, it might contribute to relationship health.

**Attachment Theory** According to attachment theory, individuals seek protection and comfort from a primary attachment figure when feeling vulnerable or stressed. The attachment behavioral systems include proximity seeking, safe haven (source of safety when feeling threatened), and secure base (well of emotional support that serves as a launching pad for exploration). Individuals vary in the extent to which they have *avoidant* (beliefs that others tend to be unresponsive to needs or discomfort with dependency on others) and *anxious* (beliefs that others may reject them or that they are unworthy of love) orientations. Importantly, anxious and avoidant attachment are negatively associated with dispositional forgiveness (Burnette, Davis, Green, Worthington, & Bradfield, 2009). Anxious individuals tend to exaggerate the impact of transgressions and thus engage in greater angry rumination (Burnette, Taylor, Worthington, & Forsyth, 2007), and avoidant individuals tend to respond to transgressions with distancing and withdrawal and thus experience reduced empathy; both of these responses yield unforgiveness (Burnette et al., 2009). Among individuals whose blood pressure was monitored before and during an interview regarding a past betrayal (Lawler-Row et al., 2006), secure attachment was associated with greater forgiveness as well as reduced systolic blood pressure and greater blood pressure recovery. Recent work also highlights changes in cortisol production as a key mechanism linking attachment anxiety to reduced health in the aftermath of conflict (Jaremka et al., 2013). Securely attached individuals tend to more readily let go of negative emotions, leading to health benefits. However, insecurely attached individuals tend to be more vulnerable to stress, less likely to benefit from social support networks, and rely more heavily on external coping methods (e.g., alcohol, overeating) when they encounter stress (Lawler-Row, Hyatt-Edwards, Wuensch, & Karremans, 2011; Maunder & Hunter, 2001). Thus, forgiveness may be the “key mediator of the association between attachment and health” (Lawler-Row et al., 2011, p. 179).

Secure and caring relationships are critical to mental health, but emotional bonds take time to form; attachment is a process that unfolds relatively slowly over the course of months or years (Hazan & Zeifman, 1994). Across the lifespan, individuals’ attachment needs are met by a series of primary attachment figures, from parents in childhood to friends in adolescence to romantic partners in adulthood. However, individuals can have multiple concurrent attachments and may seek out different individuals (e.g., friends and romantic partners) to serve various attachment-related needs like security and caregiving (Fraleigh & Davis, 1997). Unforgiveness of a romantic partner may have the greatest negative health impact for those who are insecurely attached. However, unforgiveness of friends, particularly long-term friends who are relatively unique (e.g., a best friend), may also have health consequences because the victim relies on that relationship to serve at least some attachment functions. Future research should investigate health consequences of forgiveness in friendships drawing on an attachment perspective.

## Future Directions and Applications

In addition to the ideas proposed throughout the previous section, other potentially fruitful areas for future research involve expanding the focus of health outcomes beyond the victims of transgressions. For example, a conundrum exists when individuals have forgiven a romantic partner for a transgression, but a close partner of theirs (e.g., a friend or family member) has not. Research on *third-party forgiveness* suggests that third parties (close partners of the victim) are less forgiving than first parties (the victims themselves) because first parties are more likely to feel greater commitment to the perpetrator and make more benign attributions for the perpetrator's behavior (Green, Burnette, & Davis, 2008). This research suggests that forgiveness and unforgiveness could have significant effects beyond the dyad. An extension of this research could be to examine whether first parties (victims) of transgressions experience health benefits associated with their forgiveness, whereas third parties may experience health costs associated with their unforgiveness; such health costs most likely would be linked to the quality of their relationship to the victim (e.g., commitment, attachment, relationship value). Furthermore, it would be interesting to explore the extent to which health benefits from forgiveness for victims are attenuated in the face of third-party unforgiveness; it seems likely that individuals would experience tension or stress when their close friend or family member maintains vengeful feelings toward their romantic partner, and such stress could lead to poor health outcomes. These broader social network effects of forgiveness or unforgiveness may tend to be overlooked by practitioners and individuals themselves, but may be important to consider.

In another example of context beyond the dyad, past research has examined how aspects of individuals' work environments influence forgiveness; future research could explore in what ways such organizational variables are linked to health. For example, perceptions of procedural justice affect forgiveness, especially for victims with less power (Aquino, Tripp, & Bies, 2006). If individuals do not feel that the "system" is fair and their grievance has been taken seriously, festering feelings of anger, avoidance, and revenge could lead to deleterious health outcomes. More broadly, future work should explore health benefits of forgiveness in the workplace; coworker relationships are an important but understudied category of interpersonal relationships. Although a great deal of research has examined processes relating to conflict and forgiveness in workplace settings, very little research has measured health outcomes (Cox et al., 2012).

Another understudied area is that of the perpetrator. Research has demonstrated a range of health benefits (i.e., blood pressure reduction) of forgiveness for perpetrators as well as victims (Hannon, Finkel, Kumashiro, & Rusbult, 2012). Offering forgiveness to perpetrators communicates a victim's relationship commitment, facilitates prorelationship behaviors (Karremans & Van Lange, 2004), and leads perpetrators to experience greater feelings of trust, which increases relationship satisfaction (Wieselquist, 2009). Perpetrator outcomes generally are an understudied area. Any hypotheses advanced for victim health outcomes could be tested in

parallel for perpetrators. Perpetrators may be motivated to make amends and seek forgiveness in order to repair their relationships, but they also could be motivated by potential physical and mental health benefits. Victims could be motivated to offer forgiveness not only to benefit their own health, but that of the perpetrator as well.

An important implication of this collective body of research is that physical, mental, and relationship health all are connected to forgiveness processes. Relationships among these domains of health may sometimes operate in parallel manner (increases in mental health could lead to increases in physical health), but may sometimes operate at odds with each other (increases in relationship health could lead to decreases in mental health if an unhealthy relationship is maintained due to forgiveness). For example, it is important for perpetrators to offer sincere amends for their transgressions to maximize mental health outcomes for victims (Luchies et al., 2010; Schumann, 2012). Recognition of these complex relationships could inform interventions designed to enhance forgiveness.

## Conclusion

Forgiveness generally is associated with positive health benefits. Relationships theories provide useful tools for prediction, understanding underlying processes that enhance health benefits of forgiveness or magnify harm of unforgiveness. However, researchers need to examine multiple types of health to fully understand the links among them as well as the occasional tradeoffs. There are vast opportunities for future research to identify what constitutes “healthy” forgiveness and to expand forgiveness research into new areas. For example, health costs and benefits of unforgiveness and forgiveness likely exist for more than just the victim, but also for perpetrators and third parties. Researchers may have underestimated the importance of relationship quality of friendships and nonmarital relationships. Clinicians should be aware that unforgiveness can lead to poor health outcomes for victims and perpetrators even in nonmarital relationships.

## References

- Aquino, K., Tripp, T. M., & Bies, R. J. (2006). Getting even or moving on? Power, procedural justice, and types of offense as predictors of revenge, forgiveness, reconciliation, and avoidance in organizations. *Journal of Applied Psychology, 91*, 653–668.
- Berry, J. W., & Worthington, E. L., Jr. (2001). Forgivingness, relationship quality, stress while imagining relationship events, and physical and mental health. *Journal of Counseling Psychology, 48*, 447–455.
- Braithwaite, S. R., Selby, E. A., & Fincham, F. D. (2011). Forgiveness and relationship satisfaction: Mediating mechanisms. *Journal of Family Psychology, 25*, 551–559.
- Burnette, J. L., Davis, D. E., Green, J. D., Worthington, E. L., Jr., & Bradfield, E. (2009). Insecure attachment and depressive symptoms: The mediating role of rumination, empathy, and forgiveness. *Personality and Individual Differences, 46*, 276–280.

- Burnette, J. L., McCullough, M. E., Van Tongeren, D. R., & Davis, D. E. (2012). Forgiveness results from integrating information about relationship value and exploitation risk. *Personality and Social Psychology Bulletin*, *38*, 345–356.
- Burnette, J. L., Taylor, K. W., Worthington, E. L., Jr., & Forsyth, D. R. (2007). Attachment and trait forgiveness: The mediating role of angry rumination. *Personality and Individual Differences*, *42*, 1585–1596.
- Cox, S. S., Bennett, R. J., Tripp, T. M., & Aquino, K. (2012). An empirical test of forgiveness motives' effects on employees' health and well-being. *Journal of Occupational Health Psychology*, *17*, 330–340.
- Coyle, C. T., & Enright, R. D. (1997). Forgiveness intervention with postabortion men. *Journal of Consulting and Clinical Psychology*, *65*, 1042–1046.
- Demir, M. (2010). Close relationships and happiness among emerging adults. *Journal of Happiness Studies*, *11*, 293–313.
- Dienstbier, R. A. (1989). Arousal and physiological toughness: Implications for mental and physical health. *Psychological Review*, *96*, 84–100.
- Duchaine, B., Cosmides, L., & Tooby, J. (2001). Evolutionary psychology and the brain. *Current Opinion in Neurobiology*, *11*, 225–230.
- Finkel, E. J., Rusbult, C. E., Kumashiro, M., & Hannon, P. A. (2002). Dealing with betrayal in close relationships: Does commitment promote forgiveness? *Journal of Personality and Social Psychology*, *82*, 956–974.
- Fraley, R. C., & Davis, K. E. (1997). Attachment formation and transfer in young adults' close relationships and romantic relationships. *Personal Relationships*, *4*, 131–144.
- Green, J. D., Burnette, J., & Davis, J. L. (2008). Third-party forgiveness: (Not) forgiving your close other's betrayer. *Personality and Social Psychology Bulletin*, *34*, 407–418.
- Greenberg, L., Warwar, S., & Malcolm, W. (2010). Emotion-focused couples therapy and the facilitation of forgiveness. *Journal of Marital and Family Therapy*, *36*, 28–42.
- Hannon, P. A., Finkel, E. J., Kumashiro, M., & Rusbult, C. E. (2012). The soothing effects of forgiveness on victims' and perpetrators' blood pressure. *Personal Relationships*, *19*, 279–289.
- Hannon, P. A., Rusbult, C. E., Finkel, E. J., & Kamashiro, M. (2010). In the wake of betrayal: Amends, forgiveness, and the resolution of betrayal. *Personal Relationships*, *17*, 253–278.
- Hazan, C., & Zeifman, D. (1994). Sex and the psychological tether. In K. Bartholomew & D. Pearlman (Eds.), *Advances in personal relationships: Vol. 5. Attachment processes in adulthood* (pp. 151–178). London, UK: Jessica Kingsley.
- Huang, S. T., & Enright, R. D. (2000). Forgiveness and anger-related emotions in Taiwan: Implication for therapy. *Psychotherapy*, *37*, 71–79.
- Jaremka, L.M., Glaser, R., Loving, T.J., Malarkey, W.B., Stowell, J.R., & Kiecolt-Glaser, J.K. (2013). Attachment anxiety is linked to alterations in cortisol production and cellular immunity. *Psychological Science*, *24*(3), 272–279.
- Karremans, J. C., & Van Lange, P. A. M. (2004). Back to caring after being hurt: The role of forgiveness. *European Journal of Social Psychology*, *34*, 207–227.
- Kluwer, E. S., & Karremans, J. (2009). Unforgiving motivations following infidelity: Should we make peace with our past. *Journal of Social Clinical Psychology*, *28*, 1298–1325.
- Lawler, K. A., Younger, J. W., Piferi, R. L., Billington, E., Jobe, R., Edmondson, K., et al. (2003). A change of heart: Cardiovascular correlates of forgiveness in response to interpersonal conflict. *Journal of Behavioral Medicine*, *26*, 372–393.
- Lawler, K. A., Younger, J. W., Piferi, R. L., Jobe, R., Edmondson, K., & Jones, W. H. (2005). The unique effects of forgiveness on health: An exploration of pathways. *Journal of Behavioral Medicine*, *28*, 157–167.
- Lawler-Row, K. A., Hyatt-Edwards, L., Wuensch, K. L., & Karremans, J. C. (2011). Forgiveness and health: The role of attachment. *Personal Relationships*, *18*, 170–183.
- Lawler-Row, K. A., Younger, J. W., Piferi, R. L., & Jones, W. H. (2006). The role of adult attachment style in forgiveness following an interpersonal offense. *Journal of Counseling and Development*, *84*, 493–502.

- Le, B., & Agnew, C. R. (2003). Commitment and its theorized determinants: A meta-analysis of the investment model. *Personal Relationships, 10*, 37–57.
- Lehmiller, J. J. (2010). Differences in relationship investments between gay and heterosexual men. *Personal Relationships, 17*, 81–96.
- Luchies, L. B., Finkel, E. J., McNulty, J. K., & Kumashiro, M. (2010). The doormat effect: When forgiving erodes self-respect and self-concept clarity. *Journal of Personality and Social Psychology, 98*, 734–749.
- Maunder, R. G., & Hunter, J. J. (2001). Attachment and psychometric medicine: Developmental contributions to stress and disease. *Psychometric Medicine, 63*, 556–567.
- McCullough, M. E., Fincham, F. D., & Tsang, J. (2003). Forgiveness, forbearance, and time: The temporal unfolding of transgression related interpersonal motivations. *Journal of Personality and Social Psychology, 84*, 540–557.
- McCullough, M. E., Pargament, K. I., & Thoresen, C. E. (Eds.). (2000). *Forgiveness: Theory, research, and practice*. New York, NY: Guilford Press.
- McCullough, M. E., Orsulak, P., Brandon, A., & Akers, L. (2007). Rumination, fear, and cortisol: An in vivo study of interpersonal transgressions. *Health Psychology, 26*, 126–132.
- McEwen, B. S. (2004). Protection and damage from acute and chronic stress: Allostasis and allostatic overload and relevance to the pathophysiology of psychiatric disorders. *Annals of the New York Academy of Sciences, 1032*, 1–7.
- Morse, C. R., & Metts, S. (2011). Situational and communicative predictors of forgiveness following a relational transgression. *Western Journal of Communication, 75*, 239–258.
- Orcutt, H. K. (2006). The prospective relationship of interpersonal forgiveness and psychological distress symptoms in college women. *Journal of Counseling Psychology, 53*, 350–361.
- Orcutt, H. K., Pickett, S. M., & Pope, E. B. (2008). The relationship of offense-specific forgiveness to posttraumatic stress disorder symptoms in college students. *Journal of Aggression, Maltreatment & Trauma, 16*, 72–91.
- Petersen, M. B., Sell, A., Tooby, J., & Cosmides, L. (2010). To punish or repair? Evolutionary psychology and lay intuitions about modern criminal justice. *Evolution and Human Behavior, 33*, 682–695.
- Riek, B. M., & Mania, E. W. (2012). The antecedents and consequences of interpersonal forgiveness: A meta-analytic review. *Personal Relationships, 19*, 304–325.
- Rusbult, C. E. (1980). Commitment and satisfaction in romantic associations: A test of the investment model. *Journal of Experimental Social Psychology, 16*, 172–186.
- Rye, M. S., & Pargament, K. I. (2002). Forgiveness and romantic relationships in college: Can it heal the wounded heart? *Journal of Clinical Psychology, 58*, 419–441.
- Rye, M. S., Pargament, K. I., Pan, W., Yingling, D. W., Shogren, K. A., & Ito, M. (2005). Can group interventions facilitate forgiveness of an ex-spouse? A randomized clinical trial. *Journal of Consulting and Clinical Psychology, 73*, 880–892.
- Schumann, K. (2012). Does love mean never having to say you're sorry? Associations between relationship satisfaction, perceived apology sincerity, and forgiveness. *Journal of Social and Personal Relationships, 29*, 997–1010.
- Stoia-Caraballo, R., Rye, M. S., Pan, W., Kirschman, K. J. B., Lutz-Zois, C., & Lyons, A. M. (2008). Negative affect and anger rumination as mediators between forgiveness and sleep quality. *Journal of Behavioral Medicine, 31*, 478–488.
- Strelan, P., & Covic, T. (2006). A review of forgiveness process models and a coping framework to guide future research. *Journal of Social and Clinical Psychology, 25*, 1059–1085.
- Struthers, C. W., Dupius, R., & Eaton, J. (2005). Promoting forgiveness among co-workers following a workplace transgression: The effects of social motivation training. *Canadian Journal of Behavioural Science, 37*, 299–308.
- Tsang, J., McCullough, M. E., & Fincham, F. D. (2006). The longitudinal association between forgiveness and relationship closeness and commitment. *Journal of Social and Clinical Psychology, 25*, 448–472.



- Tse, W. S., & Yip, T. H. J. (2009). Relationship among dispositional forgiveness of others, interpersonal adjustment and psychological well-being: Implication for interpersonal theory of depression. *Personality and Individual Differences, 46*, 365–368.
- Wieselquist, J. (2009). Interpersonal forgiveness, trust, and the investment model of commitment. *Journal of Social and Personal Relationships, 26*, 531–548.
- Witvliet, C. V. O., Ludwig, T. E., & Laan Vander, K. L. (2001). Granting forgiveness or harboring grudges: Implications for emotion, physiology, and health. *Psychological Science, 12*, 117–123.
- Worthington, E. L., Jr. (2003). *Forgiving and reconciling: Bridges to wholeness and hope*. Downers Grove, IL: Intervarsity Press.
- Worthington, E. L., Jr. (2006). *Forgiveness and reconciliation: Theory and application*. New York, NY: Routledge/Taylor & Francis Group.
- Worthington, E. L., Jr., Jennings, D. J. I. I., & DiBlasio, F. A. (2010). Interventions to promote forgiveness in couple and family context: Conceptualization, review, and analysis. *Journal of Psychology and Theology, 38*, 231–245.
- Worthington, E. L., Jr., & Scherer, M. (2004). Forgiveness is an emotion-focused coping strategy that can reduce health risks and promote health resilience: Theory, review, and hypotheses. *Psychology and Health, 19*, 385–405.
- Ysseldyk, R., Matheson, K., & Anisman, H. (2009). Forgiveness and the appraisal-coping process in response to relationship conflicts: Implications for depressive symptoms. *Stress: The International Journal on the Biology of Stress, 12*, 152–166.
- Ysseldyk, R., & Wohl, M. J. A. (2012). I forgive therefore I'm committed: A longitudinal examination of commitment after a romantic relationship transgression. *Canadian Journal of Behavioral Science, 44*, 257–263.