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Unforgiveness, Rumination, and Depressive Symptoms among Older Adults

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Abstract

The experience of feeling unforgiven for past transgressions may contribute to depressive symptoms in later life. This paper tests a model in which feeling unforgiven by God and by other people have direct effects on depressive symptoms while self-unforgiveness and rumination mediate this relationship. The sample consisted of 965 men and women aged 67 and older who participated in a national probability sample survey, the Religion, Aging, and Health Survey. Results from a latent variable model indicate that unforgiveness by others has a significant direct effect on depressive symptoms and an indirect effect via self-unforgiveness and rumination. However, rather than having a direct effect on depressive symptoms, unforgiveness by God operates only indirectly through self-unforgiveness and rumination. Similarly, self-unforgiveness has an indirect effect on depressive symptoms through rumination.

Keywords

depression; forgiveness; mental health; regrets; transgressions

Introduction

Depression is one of the most common sources of emotional suffering within the aging population (Blazer, 2003). The relationship between age and symptoms of depression appears to be curvilinear; that is, depressive symptoms decrease from young adulthood to middle age and then spike sharply upward during the later years (Kessler, Foster, Webster, & House, 1992). This mental health issue has far-reaching consequences because it contributes to a diminished quality of life not only for the older adults who suffer from depression but also for the family members who care about them (Alexopoulos, 2005). Understanding the factors that contribute to depressive symptoms in later life is important to geriatric mental health practitioners as they seek to develop interventions that can prevent or remediate such symptoms. An underexplored but likely contributing factor is the unresolved feelings that some older adults experience due to pain that they have inflicted on others. That is, older adults' inability to forgive themselves for their own actions may result in enduring ruminations that lead to and exacerbates depressive symptoms (Ingersoll-Dayton & Krause, 2005). This paper contributes to the existing literature by developing and testing a model that aims to show why

older people who have difficulty forgiving themselves tend to experience more symptoms of depression. Forgiveness by God, forgiveness by others, and rumination figure prominently in our conceptual scheme.

Over the course of a lifetime, virtually everyone hurts someone else. As Halling (1994, p. 112) observes, “to be alive is to be fallible.” Some transgressions are acts of omission; for example, providing insufficient care to sick family and friends or not being present at their deaths (Knight, 1966). Tait and Silver (1989) recount the story of a widow whose husband died a decade earlier. She continued to ruminate about the fact that when her husband wanted to talk to her about his death, she quieted him by saying, “Don’t talk silly.” Though she had not attempted to hurt her husband, her actions cut off her husband’s opportunity to voice his concerns. Other transgressions are acts of commission, such as intentionally or unintentionally causing physical or psychological harm to others (Coleman, 1999). In a study that focused on ways in which people betrayed each other, researchers found that individuals aged 60 and over had betrayed 14% of the people in their network (Hansson, Jones, & Fletcher, 1990). These betrayals involved a variety of people including spouses, family, friends, and co-workers. Many of the events had occurred decades before and yet the individuals responsible for the betrayals continued to feel conflicted about their actions. Similarly, in a study of regrets among low-income adults aged 58 to 95, Choi and Jun (2009) found that people were troubled by their own past behaviors (e.g., impatience, angry outbursts) that had resulted in damaged interpersonal relationships.

These unresolved feelings have implications for geriatric mental health since, during later life, individuals often begin to review their lives (Butler, 1963). Part of this process involves trying to come to terms with the ways in which they have hurt others. Confronting painful memories associated with their own transgressions can result in deep-seated feelings of remorse, an inability to accept themselves, and ultimately lead to despair (Wong, 1995; Erickson, 1964). Data from a qualitative study of older adults suggests that likely stepping stones in this process are the inability to forgive oneself for previous transgressions and persistent ruminative thoughts about one’s own inadequacy (Ingersoll-Dayton & Krause, 2005). Using a nationally representative sample of older adults, this paper tests a model that includes older adults’ inability to experience forgiveness (i.e., unforgiveness) as a precursor to depressive symptoms. In so doing, we consider multiple sources of unforgiveness and examine the roles of both unforgiveness and rumination in contributing to symptoms of depression.

Conceptual Model

A model developed by Toussaint and Web (2005) provides a useful starting point for conceptualizing the pathways between unforgiveness and depressive symptoms. This model suggests that there is a direct relationship between unforgiveness and poor mental health. In addition, Toussaint and Web’s model proposes an indirect relationship between unforgiveness and poor mental health through mediators, such as rumination. A rumination is a repetitive thought that has no resolution (Nolen-Hoeksema, 1996). While Toussaint and Web’s model provides a framework for showing how unforgiveness and rumination contribute to poor mental health outcomes, it does not distinguish among multiple sources of unforgiveness (i.e., forgiveness by God, forgiveness by others, and forgiveness of others) that have been identified as important by researchers (Enright & North, 1998; Toussaint & Web, 2005). As we point out below, there may be significant causal linkages among these different sources of forgiveness

We elaborate on Toussaint and Web’s model in three important ways. First, we include multiple sources of unforgiveness: from God, from others, and from oneself. Second, we show how some dimensions of forgiveness (i.e., forgiveness by God and forgiveness by others) play an important role in determining whether older people are able to forgive themselves. Third, in the process, we bring the notion of rumination to the foreground by exploring whether this

mechanism can help explain why unforgiveness of self is associated with depressive symptoms in late life.

Our conceptual model (see Figure 1) includes the following linkages: 1) unforgiveness by God and unforgiveness by others is related to self-unforgiveness, 2) all three sources of unforgiveness (i.e., God, others, self) are associated directly with depressive symptoms; 3) self-unforgiveness is associated with rumination; 4) self-unforgiveness and rumination mediate the relationship between unforgiveness by God and depressive symptoms as well as unforgiveness by others and depressive symptoms. The literature that supports these linkages is presented in the sections that follow.

Unforgiveness by God and Unforgiveness by Others is Related to Self-unforgiveness

Unforgiveness has been defined as a “cold emotion” (Worthington & Wade, 1999, p. 386) that involves feelings of resentment, bitterness, and even hatred. This definition of unforgiveness focuses on a specific source of unforgiveness, that is, the inability to forgive others who have committed a transgression. This source of unforgiveness has thus far received the greatest attention in the research literature (Harris & Thoresen, 2005). However, the focus of the present study is on an inability to come to terms with transgressions that have been committed by oneself. Therefore, we need to consider the different sources of forgiveness and unforgiveness (i.e., self, others, God) that may be associated with an inability to make peace with oneself.

The focal source of unforgiveness in relation to transgressions committed by oneself is self-unforgiveness. The inability to forgive oneself has been variously referred to as “fundamental estrangement” (Bauer et al., 1992, p.154) and “self-resentment” (Enright and the Human Development Group, 1996, p. 116). Associated with self-unforgiveness are feelings such as guilt, shame, embarrassment and regret (Tangney, Boone, & Dearing, 2005). For example, former soldiers have described the chronic guilt they experienced associated with their inability to forgive themselves for violent acts they committed during wartime (Coleman, 1999; Ingersoll-Dayton & Krause, 2005).

Perhaps one of the key obstacles to self-forgiveness is that individuals who have committed a transgression believe they are not forgiven by the people whom they have hurt. If so, unforgiveness from victims of previous transgressions is another important source of unforgiveness that we must consider as we try to understand the factors that contribute to individuals’ inability to forgive themselves. Rather than forgiving their transgressors, victims may bare grudges toward them and thereby enhance the transgressor’s feelings of guilt and shame (Exline & Baumeister, 2000). Further, evidence suggests that forgiveness by others contributes to self-forgiveness (Hall & Fincham, 2008; Ingersoll-Dayton & Krause, 2005; see Zechmeister & Romero, 2002, for an exception) suggesting that unforgiveness by others contributes to self-unforgiveness.

Another obstacle to self-forgiveness may be the belief that one is unforgiven by God or a Higher power. For example, Butler (1963, p. 70) described a client who felt intensely guilty about her past transgressions. These feelings appeared to be related, at least in part, to her deep-seated concerns about “God’s wrath.” Thus unforgiveness from God may be another important source of unforgiveness that we should consider as we identify the precursors to self-unforgiveness. Several studies (Cararo & Exline, 2002, cited in Exline & Martin, 2005; Hall & Fincham, 2008; Ingersoll-Dayton & Krause, 2005) have found that believing one is forgiven by God or a Higher power is associated with a greater ability to forgive oneself. These findings suggest that unforgiveness by God contributes to unforgiveness by the self.

Taken together, the present study builds upon general social psychological principles (Cooley, 1902/1922; Mead, 1962) as well as empirical research (Hall & Fincham, 2008; Ingersoll-

Dayton & Krause, 2005) suggesting that individuals derive their self assessments from how they are perceived by others. If others (i.e., God and other people) are perceived as unforgiving, then individuals who have transgressed are likely to see themselves as unworthy and be less forgiving of themselves. Evidence suggests that unforgiveness by God and unforgiveness by others are associated with each other. Scobie and Scobie (1998) refer to the Christian model of forgiveness which expects unconditional forgiveness of others as a mirror of God's forgiveness. By extension, forgiveness by others can be conceived as another component of this Christian model. Thus we hypothesize that when older people feel unforgiven by God, they are likely to feel unforgiven by others; and both sources of unforgiveness are likely to be related with an inability to forgive themselves.

Multiple Sources of Unforgiveness are Associated with Depressive Symptoms

Here we review the handful of studies that include the relationship between unforgiveness and poor mental health. Because so few researchers have examined the mental health consequences of the three sources of unforgiveness (i.e., self, others, God) that are the focus of our inquiry, we will also draw from studies examining the relationship between forgiveness and mental health to provide clues about possible relationships between unforgiveness and depressive symptoms.

In one of the few studies on self-unforgiveness among older adults, Ingersoll-Dayton and Krause (2005) conducted a qualitative analysis of in-depth interviews that uncovered some of the mechanisms involved in the relationship between self- unforgiveness and mental health problems. They found that individuals who had trouble forgiving themselves tended to be unable to accept their imperfections or change their own unattainable standards. They surmised that this lack of self- acceptance contributed to poor mental health. The relationship between self-unforgiveness and mental health problems has been supported by a few quantitative studies. Based on a nationwide study of adults aged 18 and over, those who scored lower on self-forgiveness experienced greater psychological distress (Toussaint, Williams, Musick, & Everson, 2001) and higher levels of depression (Toussaint, Williams, Musick, & Everson-Rose; 2008). Similarly, clients from a Christian outpatient counseling center who had difficulty forgiving themselves also evidenced a host of negative emotional outcomes, including greater depression (Mauger, et al., 1992).

With regard to unforgiveness from others, Enright and the Human Development Group (1996) hypothesized that not experiencing the forgiveness of those who have been the victims of one's transgressions can result in increased emotional pain. One of the few studies that has empirically examined the relationship between unforgiveness by others and mental health is based upon college students. Witvliet, Ludwig, and Bauer (2002) asked these students to reflect on a transgression they had committed in the past. The researchers then compared the effects of different imagined responses from the victims of their transgression. Students who imagined receiving unforgiving responses from their victims (i.e., that their victims continued to bear a grudge toward them) experienced numerous negative emotions, including greater sadness.

With respect to unforgiveness from God, only a few studies have examined the relationship between this source of unforgiveness and depressive symptoms. Two studies, both based on national samples, are of particular relevance to this relationship. One of these studies (Krause & Ellison, 2003) focused on a sample of older adults. They found that when individuals felt forgiven by God for things they had done wrong, they experienced fewer depressive symptoms. The other study (Toussaint et al., 2008), using a sample of adults aged 18 and older, also found that forgiveness by God was related to reduced depression but only for women. Taken together, these two studies suggest that those who feel unforgiven by God are likely to experience more depressive symptoms.

In sum, studies that simultaneously consider the contribution of multiple sources of unforgiveness to poor mental health are rare but do suggest a relationship. This study builds upon a small body of literature that examines the association between one or more sources of unforgiveness and symptoms of depression. Here, we simultaneously examine the relationship between three sources of unforgiveness (from others, from God, and from the self) and depressive symptoms.

Self-unforgiveness and Rumination as Mediators

Being unable to forgive oneself is a painful state and, as a result, people are likely to strive to move beyond this state by coming to terms with their transgressions. However, for some people it is not possible to come to terms with what they have done to another person. This inability to forgive themselves may be related to a variety of reasons including that they feel unforgiven by God for their transgressions and/or by the victims of their transgressions. As a result, some people go over and over their transgressions in their minds and are unable to make peace with themselves. When individuals are unable to forgive themselves, they may begin to ruminate (Ingersoll-Dayton & Krause, 2005). A study of college students found that those who had problems with self-forgiveness tended to ruminate about their angry memories (Barber, Maltby, & Macaskill, 2005).

Ruminations can persist with intensity for many years. In the earlier-mentioned study of older adults who had been involved in betrayals, the participants often referred to transgressions that occurred much earlier in their lives (Hansson, et al., 1990). Over 50% of those who betrayed others or had been betrayed described incidents that transpired more than 20 years earlier while 25% described incidents that occurred over 30 years earlier. In a similar study of negative life events among older adults (Tait & Silver, 1989), participants described events, some of which involved hurting others, that occurred an average of 22 years earlier. Despite the length of time intervening since the life event, 21% reported at least sometimes having difficulty dispelling ruminations about the event while 9% reported frequent difficulty with this problem. The persistence of such ruminations is illustrated by a 71-year-old man who explained, “The bad things you’ve done stay with you forever and they can perhaps be less of a torment on your mind after a period of time. But, by God, they’re always there” (Ingersoll-Dayton & Krause, 2005, p. 275).

Such unwanted ruminations may contribute to depressive symptoms. When individuals commit transgressions for which they cannot forgive themselves, they are likely to continue to ruminate about their actions (Hansson, Jones & Fletcher, 1990; Ingersoll-Dayton & Krause, 2005). While mulling over past events, those who ruminate tend to focus on their own failures (Nolen-Hoeksema, Wisco, & Lyubomirsky, 2008). Ruminating may invoke more negative self-evaluations and pessimism (Nolen-Hoeksema, Larson, & Grayson 1999). Moreover, obsessive rumination is alienating to others and leads to a loss of social support. In a study of individuals who had recently lost a close family member or friend to a terminal illness, Nolen-Hoeksema and Davis (1999) found that those who ruminated experienced their networks as less supportive. Similar to these findings, the chronic ruminations of those who cannot make peace with themselves after a transgression may alienate friends and family, thereby contributing to greater depressive symptoms.

The link between rumination and late life depression has only recently become a focus for researchers in geriatric mental health (Rewston, Clarke, Moniz-Cook, & Waddington, 2007). For example, Choi and Jun (2009) found that regrets about past behaviors that had been hurtful to others was a key predictor of depressive symptoms among older adults. The present study builds upon the larger body of research that has examined the role of rumination as a factor that contributes to depression in the general population. Here, we conceptualize rumination as a mechanism by which an inability to forgive oneself increases depressive symptoms. To the

extent that self-unforgiveness is distressing, ruminating can be seen as a response to this distress. Nolen-Hoeksema and her colleagues (2008) refer to rumination as a maladaptive response to distressing situations. They explain that when confronted with problematic situations, individuals may attempt to handle them by obsessively focusing on the negative aspects of the situation. In so doing, rumination then interferes with potential adaptive responses (e.g., problem solving) and contributes to an inability to take action. Thus when individuals respond to the distressing situation of self-unforgiveness by ruminating, they are likely to experience increased negativity and hopelessness.

Hypothesized Pathways among Unforgiveness, Rumination, and Depressive Symptoms

As older adults confront memories of past transgressions, they may be unable to experience forgiveness from others, from God, and, ultimately, from themselves. Consistent with Figure 1, an elaboration of the model developed by Toussaint and Web (2005), we test four hypotheses. The first hypothesis is that unforgiveness from God and unforgiveness from other people is associated with self-unforgiveness. The second is that each of the three sources of unforgiveness (from God, others, and self) is directly related to depressive symptoms. The third is that self-unforgiveness and rumination serve as mediators of the relationship between both unforgiveness from God and depressive symptoms as well as unforgiveness from others and depressive symptoms. The fourth hypothesis is that rumination acts as a mediator of the relationship between self-unforgiveness and symptoms of depression.

The present study adds to the existing research on the overlooked topic of unforgiveness as a contributing factor to geriatric depression. One way in which it adds is by including multiple sources of unforgiveness and examining the linkages among these sources. The second contribution is the inclusion of rumination as a possible mechanism by which unforgiveness is associated with depression. Third, our study relies on a national probability sample of older adults and, in so doing, allows us to generalize beyond findings from convenience samples that are more characteristic of existing research on this topic.

Methods

Sample

In this study, we used data from an ongoing national probability sample survey, the Religion, Aging, and Health Survey (Krause, 2008). This survey was based on face-to-face interviews with older adults aged 66 and over. The study population focused on practicing Christians, those who were formerly Christian but no longer practiced any religion, and those who had never been affiliated with any faith. The sampling frame consisted of individuals from the Centers for Medicare and Medicaid (CMS) beneficiary list. A five step process, detailed by Krause (2008), was used to draw the sample from the CMS files. Two particular strengths of the survey are its focus on religious issues, including the topic of forgiveness, and its sample that includes a large portion of Black as well as White older people, due to oversampling of Blacks.

The original wave of the survey was conducted in 2001. A total of 1500 interviews were conducted resulting in a response rate of 62%. The second survey, conducted in 2004, was based on 1,024 interviews. Non-responses were attributable to refusing to participate (n=75), not being able to locate previous participants (n=112), illness (n=70), moving to a nursing home (n=11), and death (n=208). Excluding those who had died or moved to a nursing home, the re-interview rate from the Wave 1 survey was 80%. Wave 1 included all the variables of interest in this study except rumination. Therefore, the data used in the present analyses are from the second wave of the survey conducted in 2004 when all the variables of interest in this study were collected.

Our sample consisted of 965 participants, 63% of whom were women. Their ages ranged from 67 to 98 ($M=77.3$, $SD=6.1$), and 51% were White, 45% Black, 3% racially mixed, and the remaining 1% were some other race or ethnicity. With regard to marital status, 47% of the participants were currently married, 40% widowed, 8% divorced, 4% never married and 1% separated. The participants' religious preferences were: 63% Protestant, 18% Catholic/Roman Catholic, 15% some other Christian faith, 1% some non-Christian faith and 3% no religious preference. Family income ranged from less than \$5000 a year (2%) to over \$80,000 (2%). The modal (14%) family income was between \$10,000 and \$15,000.

Measures

Depressive symptoms were measured by three items from the CES-D scale (Radloff, 1977): "I felt I could not shake off the blues, even with the help of my family and friends," "I felt depressed," and "I felt sad." Each item was measured by a 4-point Likert scale ranging from 1 (rarely or none of the time) to 4 (most or all of the time). Factor loadings and measurement error for these items are provided in Table 1. Using these values to compute reliability estimates with a formula provided by DeShon (1998) yields a reliability estimate of .88 indicating that this measure has good reliability.

Rumination was measured by four items from the White Bear Suppression Inventory (Wegner & Zanakos, 1994): "I often have thoughts I try to avoid," "There are thoughts that keep jumping into my head," "I wish I could stop thinking about certain things," and "I have thoughts I cannot stop." The 4-point Likert response set ranged from 1 (strongly disagree) to 4 (strong agree). (See Table 1 for these items' factor loadings and measurement error.) DeShon's (1998) formula yields a reliability estimate of .91 suggesting that this measure has good reliability.

The three unforgiveness variables were each measured by a single item. Unforgiveness by God was measured by: "I believe that God forgives me for the things I have done wrong." Unforgiveness by others was measured by: "As far as I know, other people have forgiven me for the things I had done." Unforgiveness by self was measured by: "I forgive myself for the things I have done wrong." The response set for each of these items was a 5-point Likert scale (1 = strongly agree; 2= agree, 3= not sure, 4= disagree, and 5 = strongly disagree) such that a higher score indicated a greater degree of unforgiveness. Use of single items is not uncommon in forgiveness research (Hall & Fincham, 2008; Krause & Ellison, 2003). Several studies have used such single-item forgiveness measures to establish validity of longer scales (e.g., Subkoviak, et al., 1995; Wohl, DeShea & Wahkinney, 2008) implying that they themselves are valid measures of forgiveness. For instance, in validating a two factor model of interpersonal forgiveness (i.e., forgiveness of others), McCullough et al. (1998) demonstrated that a one-item measure of forgiveness was significantly correlated with these multi-item factors in two different samples (ranging from absolute values of $r(73)=.41$, $p < .001$ to $r(73) = .67$, $p < .001$); these one-item measures also demonstrated acceptable test-retest correlations (from $r(49) = .31$, $p < .05$ to $r(35) = .48$, $p < .01$).

In addition, four demographic variables that have been found to be related to measures of forgiveness (Toussaint & Williams, 2008) were included as controls. Age and education were measured as continuous variables. Sex was coded as 1= men and 2= women; and race was coded as 1= White, or White and some other race and 2= Black, or Black and some other race, or some other race or ethnicity.

Analysis Strategy

We began by conducting an attrition analysis to determine whether the loss of subjects between Wave 1 and Wave 2 occurred in a non-random manner suggesting that our findings might be biased. Subsequently, we tested each of the study variables to determine whether they were

normally distributed. Then using AMOS 17.0, we estimated a measurement model to test the relationship between the observed variables and their latent constructs. Next, using latent variable modeling, we assessed the association among the constructs in Figure 1 after controlling for the effects of age, sex, education, and race. Using standard procedures in latent variable modeling, we decomposed the relationships among variables in the model into three parts: direct effects (i.e., the influence of one variable on another without considering possible mediating variables), indirect effects (i.e., all the indirect pathways between one or more mediating variables), and total effects (i.e., the sum of the direct path and the indirect paths). Using this approach, mediation is indicated when separate paths between the intervening variables (i.e., the indirect effects) are jointly significant (Bollen, 1989; Collins, Graham & Flaherty, 1998; MacKinnon, Lockwood, Hoffman, West, & Sheets, 2002). The way in which these indirect effects are calculated may be best illustrated by a hypothetical example in which variable B mediates the effect of variable A on variable C. The indirect effect of variable A on variable C that operates through variable B is computed by multiplying the standardized effect of variable A on variable B by the standardized effect of variable B on variable C.

Results

To determine the extent of attrition in our sample from Wave 1 to Wave 2, we conducted a multinomial logistic regression. We first created a nominal-level variable containing three categories: 1= adults who remained in this study and participated at both Wave 1 and Wave 2; 2= people who were alive but refused to participate at Wave 2; and 3= adults who died between Wave 1 and Wave 2. The category consisting of adults who remained in the study represented the reference group. Then, this nominal-level variable was regressed on the following Wave 1 measures: age, sex, education, race, unforgiveness by God, unforgiveness by others, unforgiveness by self and depressive symptoms. (Note that rumination was not included in these analyses because it was not part of the Wave 1 data collection). Any statistically significant results would suggest that the findings were potentially biased due to non-random sample attrition.

The results of the attrition analysis (not shown here) indicate that three of the eight measures assessed at Wave 1 significantly differentiate between the response categories at Wave 2. That is, compared to those who stayed in the study, those who died were more likely to have a lower level of education at Wave 1 ($B = .055$; $p < .05$; odds ratio = 1.06). Also, in contrast to those who remained in the study, those who died were older at Wave 1 ($B = .082$; $p < .001$; odds ratio = 1.09) as were those who refused to participate ($B = .063$; $p < .01$; odds ratio = 1.07). Finally, in contrast to those who stayed in the study, those who died experienced more depressive symptoms at Wave 1; ($B = .324$; $p < .005$; odds ratio = 1.38). Since age and education are included as controls in the following analyses, potential bias with respect to these two constructs is minimized (Graham, 2009). However, since one of the key constructs (i.e., depressive symptoms) is also implicated in this attrition analysis, the potential effect of nonrandom subject attrition should not be overlooked as we examine the study results.

The zero-order correlations among the study variables appear in Table 2. An analysis of both multivariate normality (i.e., multivariate kurtosis) and univariate normality (i.e., skewness and kurtosis critical ratios) indicated significant deviations from normality. Hence, we used a bootstrapping method available in AMOS (with 2000 bootstrap samples) which is considered robust and able to accommodate this non-normality. Specifically, the Bollen-Stine p-value is reported for assessing the significance of overall model fit. Further, the bootstrap bias-corrected results are reported for all parameters (e.g., standardized regression weights, variances), with the exception of the values of indirect and direct effects. Since AMOS does not provide these bootstrap estimates, the standard estimates are reported here (in Table 1); bias-corrected p-values are used to determine the significance of the effects.

The fit indices from the measurement model demonstrate that it has a good fit: $\chi^2(48, 965) = 66.54, p > .05$; the Bentler-Bonnet Normed Fit Index (NFI; Bentler & Bonnet, 1980) is .986; the Comparative Fit Index (CFI; Bentler, 1990) is .996. These latter two indices are well over the recommended minimum value of .900, indicating a good fit. Further, the standardized root mean square error of approximation (RMSEA) is .02, which is below the recommended ceiling of .050 (Kelloway, 1998), an additional indicator of good fit.

Hence, we proceeded to analyze the full structural model. The resulting fit indices provide support for the hypothesized model: $\chi^2(50, 965) = 70.46, p > .05$; NFI=.985; CFI=.996; RMSEA = .021. Though not displayed, the correlation between unforgiveness by God and unforgiveness by others is significant after controlling for race, education, age and gender ($r = .255, p < .001$). Consistent with the theoretical rationale that was developed for this study, the data in Table 3 indicate that older people who do not feel they are forgiven by God (Beta = .167; $p < .001$) or by other individuals (Beta = .309; $p < .001$) are less likely to forgive themselves. Moreover, the data reveal that being unforgiven by others is associated with greater depressive symptomatology (Beta = .074; $p < .05$). Although the findings in Table 3 initially appear to provide little support for the notion that people who are unable to forgive themselves tend to experience more symptoms of depression (Beta = .035; n.s.), we obtain a clearer picture by examining the indirect effects that operate through the model. Originally, we hypothesized that unforgiveness of self would be associated with greater rumination and that greater rumination, in turn, would be related with greater depressive symptomatology. Support for this hypothesis may be found in Table 4. More specifically, the data indicate that the indirect effect of unforgiveness of self on depressive symptoms that operates through rumination is statistically significant (Beta = .073; $p < .001$). Moreover, when this indirect effect is combined with the direct effect, the resulting total effect (Beta = .108; $p < .01$) is statistically significant. Viewed in a more substantive way, these findings highlight the central role that rumination plays in the relationship between unforgiveness of self and depressive symptoms.

The data in Table 4 also help to further clarify some of the other key linkages in our model. Initially, we found that unforgiveness by God did not appear to be directly associated with depressive symptoms (Beta = .010; n.s.). However, the indirect effect of unforgiveness by God that operates through unforgiveness of self and rumination is statistically significant (Beta = .018; $p < .01$). These findings indicate that though unforgiveness by God is not directly associated with symptoms of depression, there is an indirect association via the mechanisms of self-unforgiveness and rumination.

In contrast to the results involving unforgiveness by God, the findings in Table 4 reveal that the association between unforgiveness by others and depressive symptoms is more complex. As previously mentioned, the direct association between unforgiveness by others and depressive symptoms is significant (Beta = .074; $p < .05$). However, in addition to this association there are also indirect effects that operate through the model (Beta = .033, $p < .01$) indicating that feeling unforgiven by others is associated with less self forgiveness which is related to more rumination and, in turn, to greater depressive symptomatology. Further, when the direct and indirect effects are combined, they result in a significant total effect (Beta = .107, $p < .01$)

Discussion

This study examined hypothesized pathways to symptoms of depression in later life. Using the model that was developed by Toussaint and Webb (2005) as a point of departure, our work contributes to the literature in two key ways. First, as our findings reveal, it is important to take multiple dimensions of unforgiveness into account. Second, our data also provide support for the notion that rumination plays an important role in the relationship between unforgiveness

and depression. Expanding on Toussaint and Webb's model has enabled us to infuse research on unforgiveness with broader insights from the social psychological literature. More specifically, our results indicate that the relationships between unforgiveness by God and unforgiveness of others and depressive symptoms appear to be transmitted primarily through the lens of the self (i.e., self-unforgiveness) and the unsuccessful way in which older people may attempt to process this self-relevant information (i.e., rumination). Here we will highlight the major findings, describe the limitations of the study, and discuss implications for research and practice.

One of our key findings is the indirect manner by which feeling unforgiven by God is associated with depressive symptoms. In contrast to our hypothesis, we did not find a direct effect of unforgiveness by God on depressive symptoms. This lack of relationship is supported by Toussaint and his colleagues (2001) who also found no direct relationship between unforgiveness by God and depressive symptoms. Instead, we found that unforgiveness by God was associated with depressive symptoms via an indirect pathway. Within our sample of older adults, feeling unforgiven by God was related to an inability to forgive oneself. This inability to forgive oneself was associated with a tendency to ruminate which, in turn, was associated with symptoms of depression. Our ability to identify this indirect relationship is related to the fact that we incorporated multiple sources of unforgiveness in our model. While previous research has generally focused on only a single form of unforgiveness, we focused on three sources. In so doing, this approach allowed us to show that there are meaningful relationships among the sources of forgiveness. Specifically, we found that the inability to experience God's forgiveness is negatively related to older people's ability to forgive themselves. Our findings suggest that by not forgiving themselves, older individuals may experience a downward spiral characterized by rumination and symptoms of depression.

Another important finding was the existence of multiple pathways between unforgiveness by others and depressive symptoms. While we expected that these pathways would be similar to the pathways between unforgiveness by God and symptoms of depression, they were not. Instead, the route between unforgiveness by others and depressive symptoms is both indirect (i.e., the same as the route between unforgiveness by God and depressive symptoms) and direct. That is, when we simultaneously consider both direct and indirect pathways to symptoms of depression, the direct relationship between unforgiveness by others and symptoms of depression remains. Thus it is possible that simply experiencing unforgiveness from others is associated with elevated depressive symptoms. It is also possible that additional mechanisms that were not accounted for in this study come into play when older adults believe that others do not forgive them for their transgressions. Perhaps these unforgiving individuals behave in ways that are particularly harmful to the transgressor's mental health. For example, unforgiving others may cut off contact with the older adult who has transgressed and may even encourage others to diminish their contact. In so doing, the older adult who has transgressed becomes increasingly isolated from his/her social network leading to feelings of alienation and depressive symptoms. In their study of older adults who had betrayed others, Hansson and his collaborators (1990, p. 461) conclude that betrayals may result in the suffering of older transgressors "for a lifetime from the interactions of youth that put (their) marriages or support relationships in jeopardy." Thus, it appears that experiencing unforgiveness from others may be related to symptoms of depression via multiple pathways.

A third and central finding was the key role played by rumination in the relationship between self-unforgiveness and depressive symptoms. Though we hypothesized that self-unforgiveness would have both a direct and an indirect effect on depressive symptoms, the direct effect was not significant. Instead, it was rumination that played a critical role in mediating the relationship between self-unforgiveness and depressive symptoms. By including it in our model, we are able to show that rumination appears to be a central mechanism by which an inability to

experience self-forgiveness is related to symptoms of depression. Our findings concerning the role of rumination expand on the work of Nolen-Hoeksema and her colleagues (2008) by adding unforgiveness as another distressful situation that may precipitate rumination which, in turn, exacerbates depressive symptoms.

Despite the contributions of the present study, there are also several limitations that must be acknowledged. One limitation is that we had no items related to the kinds of transgressions that these individuals have committed. Thus we are unable to discuss unforgiveness within the context of specific kinds of transgressions. Second, our measures of unforgiveness were single item indicators, although single items have been found to be valid measures of constructs that are more subjective (Robins, Hendin, & Trzesniewski, 2001) and are not uncommon among forgiveness researchers (Hall & Fincham, 2008; Krause & Ellison, 2003). Third, the data analyzed in this study were gathered at one point in time only, therefore the causal ordering in the model is based on theoretical considerations alone. Further, there may be some conceptual overlap between items in the depressive symptoms measure and the rumination measure making it even more important to be cautious about assuming a cause and effect relationship between these two constructs. Finally, the sample was primarily Christian. Though this fairly homogenous sample provides a rich opportunity to conduct an in-depth examination of unforgiveness within this specific religious group, we are unable to determine the extent to which the pattern of relationships described here are applicable to non-Christian older adults.

Our study also has implications both for research and for practice. Future research should build upon our findings by addressing some of the gaps described above. The results from this study suggest that mental health practitioners should consider the importance of unforgiveness as they assess for factors that contribute to their older clients' depression. It would be fruitful to explore, for example, the extent to which unforgiveness from multiple sources (i.e., God, others, and self) are important clinical issues. Also it may be informative to ask questions about the extent to which older clients are experiencing obsessive ruminations. Our study suggests that rumination is a key mechanism by which unforgiveness is associated with depressive symptoms thus answers to these kinds of questions could provide valuable information in the development of treatment plans. In sum, this study uncovers some important pathways to geriatric depression that would benefit from further research and clinical investigation.

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References

- Alexopoulos G. Depression in the elderly. *Lancet* 2005;365:1961–1970. [PubMed: 15936426]
- Barber L, Maltby J, Macaskill A. Angry memories and thoughts of revenge: The relationship between forgiveness and anger rumination. *Personality and Individual Differences* 2005;39:253–262.
- Bauer L, Duffy J, Fountain E, Halling S, Holzer M, Jones E, Leifer M, Rowe J. Exploring self-forgiveness. *Journal of Religion and Health* 1992;31(2):149–160.
- Blazer D. Depression in later life: Review and commentary. *Journal of Gerontology* 2003;58A:249–265.
- Bentler PM. Comparative fit indexes in structural models. *Psychological Bulletin* 1990;107:238–246. [PubMed: 2320703]
- Bentler PM, Bonett DG. Significance tests and goodness-of-fit in the analysis of covariance structures. *Psychological Bulletin* 1980;88:588–600.

- Blazer D. Depression in later life: Review and commentary. *The Journal of Gerontology* 2003;58A(3): 249–265.
- Bollen, KA. *Structural equations with latent variables*. New York: Wiley; 1989.
- Butler R. The life review: An interpretation of reminiscence in the aged. *Psychiatry* 1963;26:65–76. [PubMed: 14017386]
- Choi N, Jun J. Life regrets and pride among low-income older adults: Relationships with depressive symptoms, current life stressors and coping resources. *Aging and Mental Health* 2009;13(2):213–225. [PubMed: 19347688]
- Coleman P. Creating a life story: The task of reconciliation. *Gerontologist* 1999;39:133–139. [PubMed: 10224709]
- Collins LM, Graham JW, Flaherty BP. An alternative framework for defining mediation. *Multivariate Behavioral Research* 1998;33(2):295–312.
- Cooley, CH. *Human nature and the social order*. New York: Scribner's; 1902/1922. (Rev. ed.)
- DeShon RP. A cautionary note on measurement error correlations in structural equation models. *Psychological Methods* 1998;3:412–423.
- Enright and the Human Development Study Group. Counseling within the forgiveness triad: On forgiving, receiving forgiveness, and self-forgiveness. *Counseling and Values* 1996;40:107–126.
- Enright, R.; North, J. *Exploring forgiveness*. Madison: University of Wisconsin Press; 1998.
- Erickson, E. *Childhood and Society*. 2. New York: Norton; 1964.
- Exelime, J.; Baumeister, R. Expressing forgiveness and repentance: Benefits and barriers. In: McCullough, M.; Pargament, K.; Thoresen, C., editors. *Forgiveness: Theory, research and practice*. New York: Guilford Press; 2000. p. 133-155.
- Exelime, J.; Martin. Anger toward God: A new frontier in forgiveness research. In: Worthington, E., editor. *Handbook of Forgiveness*. New York: Routledge; 2005. p. 73-88.
- Graham JW. Missing data analysis: Making it work in the real world. *Annual Review of Psychology* 60:549–576.
- Hall J, Fincham F. Self-forgiveness: The stepchild of forgiveness research. *Journal of Social and Clinical Psychology* 2005;24(5):621–637.
- Hall J, Fincham F. The temporal course of self-forgiveness. *Journal of Social and Clinical Psychology* 2008;27(2):174–202.
- Halling S. Embracing human fallibility: On forgiving oneself and forgiving others. *Journal of religion and health* 1994;33(2):107–113.
- Hansson R, Jones W, Fletcher W. Troubled relationships in later life: Implications for support. *Journal of Personal and Social Relationships* 1990:451–463.
- Harris, A.; Thoresen, C. Forgiveness, unforgiveness, health and disease. In: Worthington, E., editor. *Handbook of Forgiveness*. New York: Routledge; 2005. p. 321-348.
- Ingersoll-Dayton B, Krause N. Self-forgiveness: A component of mental health in later life. *Research on Aging* 2005;27 (3):267–289.
- Kelloway, EK. *Using LISREL for structural equation modeling*. Thousand Oaks, CA: Sage; 1998.
- Kessler R, Foster C, Webster P, House J. The relationship between age and depressive symptoms in two national surveys. *Psychology and Aging* 1992;7(1):119–126. [PubMed: 1558696]
- Knight, B. *Psychotherapy with older adults*. 2. Thousand Oaks, CA: Sage; 1996.
- Krause, N. *Aging in the church: How social relationships affect health*. West Conshohocken, PA: Templeton Foundation Press; 2008.
- Krause N, Ellison G. Forgiveness by God, forgiveness of others, and psychological well-being in late life. *Journal for the Scientific Study of Religion* 2003;42(1):77–93.
- MacKinnon DP, Lockwood CM, Hoffmann JM, West SG, Sheets V. A comparison of methods to test mediation and other intervening variable effects. *Psychological Methods* 2002;7(1):83–104. [PubMed: 11928892]
- Mauger P, Freeman T, McBride A, Perry J, Grove D, McKinney K. The measurement of forgiveness: Preliminary research. *Journal of Psychology and Christianity* 1992;11:170–180.

- McCullough ME, Rachal KC, Sandage SJ, Worthington EL, Brown SW, Hight TL. Interpersonal forgiving in close relationships. II: Theoretical elaboration and measurement. *Journal of Personality and Social Psychology* 1998;75:1586–1603. [PubMed: 9914668]
- Meade, GH. *Mind, self, and society: From the standpoint of a social behaviorist*. Chicago: University of Chicago Press; 1962.
- Nolen-Hoeksema, S. Chewing the cud and other ruminations. In: Wyer, R., editor. *Ruminative thoughts, Advances in social cognition*. Vol. ix. N.J: Erlbaum Associates; 1996.
- Nolen-Hoeksema S, Davis C. “Thanks for sharing that”: Ruminators and their social support networks. *Journal of Personality and Social Psychology* 1999;77(4):801–814. [PubMed: 10531672]
- Nolen-Hoeksema S, Larson J, Grayson C. Gender differences in depressive symptoms. *Journal of Personality and Social Psychology* 1999;77(5):1061–1072. [PubMed: 10573880]
- Nolen-Hoeksema S, Wisco B, Lyubomirsky S. Rethinking rumination. *Perspectives on Psychological Science* 2008;3(5):400–427.
- Radloff LS. The CES-D Scale: A self-report depression scale for research in the general population. *Applied Psychological Measurement* 1977;1:385–401.
- Rewston C, Clarke C, Moniz-Cook E, Waddington R. Distinguishing worry from rumination in older people: A preliminary investigation. *Aging and Mental Health* 2007;11(5):604–611. [PubMed: 17882599]
- Robins R, Hendin H, Trzesniewski K. Measuring global self-esteem: Construct validation of a single-item measure and the Rosenberg self-esteem scale. *Personality and Social Psychology Bulletin* 2001;27(2):151–161.
- Scobie E, Scobie G. Damaging events: The perceived need for forgiveness. *Journal for the Theory of Social Behavior* 1998;28:373–401.
- Subkoviak MJ, Enright RD, Wu C, Gassin EA, Freedman S, Olson LM, Sarinopoulos I. Measuring interpersonal forgiveness in late adolescence and middle adulthood. *Journal of Adolescence* 1995;18:641–655.
- Tait, R.; Silver, R. Coming to terms with major life events. In: Uleman, JS.; Bargh, J., editors. *Unintended thoughts*. N.Y: Guilford Press; 1989. p. 351-382.
- Tangney, J.; Boone, A.; Dearing, R. Forgiving the self: Conceptual issues and empirical findings. In: Worthington, E., editor. *Handbook of forgiveness*. New York: Brunner-Routledge; 2005. p. 143-158.
- Toussaint, L.; Webb, J. Theoretical and empirical connections between forgiveness, mental health, and well-being. In: Worthington, E., editor. *Handbook of forgiveness*. New York: Routledge; 2005. p. 349-362.
- Toussaint L, Williams D, Musick M, Everson S. Forgiveness and health: Age differences in a U.S. probability sample. *Journal of Adult Development* 2001;8(4):249–257.
- Toussaint L, Williams D, Musick M, Everson-Rose S. The association of forgiveness and 12-month prevalence of major depressive episode: Gender differences in a probability sample of U.S. adults. *Mental Health, Religion & Culture* 2008;11(5):485–500.
- Toussaint L, Williams D. National survey results for Protestant, Catholic, and nonreligious experiences of seeking forgiveness and of forgiveness of self, others, and by God. *Journal of Psychology and Christianity* 2008;27(2):120–130.
- Wegner D, Zanakos S. Chronic thought suppression. *Journal of Personality* 1994;62:615–640.
- Witvliet C, Ludwig T, Bauer D. Please forgive me: Transgressors’ emotions and physiology during imagery of seeking forgiveness and victim responses. *Journal of Psychology and Christianity* 2002;21(3):219–233.
- Wohl MJA, DeShea L, Wahkinney RL. Looking within: Measuring state self-forgiveness and its relationship to psychological well-being. Preview. *Canadian Journal of Behavioural Science/Revue canadienne des sciences du comportement* 2008;40(1):1–10.
- Wong, P. The processes of adaptive reminiscences. In: Haight, B.; Webster, J., editors. *The art and science of reminiscing: Theory, research, methods, and applications*. Washington, D.C: Taylor & Francis; 1995. p. 23-35.
- Worthington E, Wade N. The psychology of unforgiveness and forgiveness and implications for clinical practice. *Journal of Social and Clinical Psychology* 1999;18(4):358–418.

Zechmeister J, Romero C. Victim and offender accounts of interpersonal conflict: Autobiographical narratives of forgiveness and unforgiveness. *Journal of Personality and Social Psychology* 2002;82(4):675–68. [PubMed: 11999931]

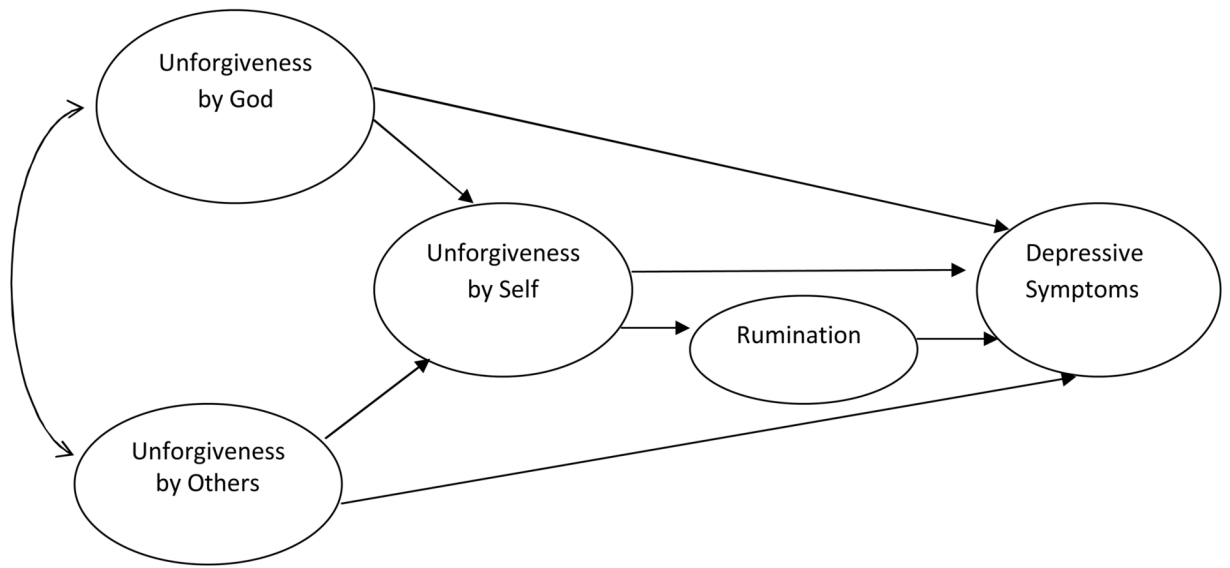


Figure 1.
Hypothesized relationships among unforgiveness, rumination, and depressive symptoms.

Table 1

Measurement Model Parameter Estimates (N=965).

Construct	Factor Loading	Measurement Error
Depressive Symptoms		
Could not shake the blues	.839	.295
Felt depressed	.860	.260
Felt sad	.839	.296
Rumination		
Try to avoid thoughts	.780	.392
Thoughts jumping into my head	.874	.235
Wish I could stop thinking about things	.873	.238
Thoughts I cannot stop	.845	.286

Table 2

Zero-order Correlations between Study Variables

Variables	1	2	3	4	5	6	7	8	9
1. Unforgiveness by God	—	.255***	.261***	.024	.012	-.082*	-.100**	.002	.087**
2. Unforgiveness by Others		—	.350***	.117***	.120***	.029	-.042	-.051	.014
3. Unforgiveness by Self			—	.185***	.114***	-.132***	-.074*	-.006	.069*
4. Rumination				—	.397***	.036	-.002	.002	-.098**
5. Depressive Symptoms					—	.005	.106**	.063	-.128***
6. Race						—	.047	-.043	-.352***
7. Gender							—	-.019	-.009
8. Age								—	-.048
9. Education									—

Note:

* p < .05,

** p < .01,

*** p < .001

Table 3
Final Model Estimates of Relationships among Unforgiveness, Rumination and Depression (N=965).

Independent Variables	Dependent Variables				
	Unforgiveness by God	Unforgiveness by Others	Unforgiveness by Self	Rumination	Depressive Symptoms
Age	.001 ^a (.000) ^b	-.049 (-.006)	.004 (.001)	.001 (.000)	.045 (.005)
Sex	-.097*** (-.169)	-.045 (-.075)	-.038 (-.073)	.010 (.021)	.086* (.109)
Education	.067 (.016)	.025 (.006)	.007 (.002)	-.109*** (-.033)	-.094*** (-.017)
Race	-.054 (-.091)	.038 (.061)	-.123*** (-.227)	.020 (.041)	-.014 (-.017)
Unforgiveness by God			.167*** (.183)		.010 (.008)
Unforgiveness by Others			.309*** (.353)		.074* (.056)
Unforgiveness by Self				.200*** (.224)	.035 (.023)
Rumination					.364*** (.216)
Multiple R ²	.020**	.006*	.172**	.050**	.173**

^aStandardized regression coefficient

^bUnstandardized regression coefficient

* $p < .05$;

** $p < .01$;

*** $p < .001$

Table 4

Direct, Indirect, and Total Effects

Dependent Variable/Independent Variable	Direct (A)	Indirect (B)	Total (A + B)
Unforg by Self/Unforg by God	.167^{***}	.....	.167 ^{***}
Unforg by Self/Unforg by Others	.309^{***}	.....	.309 ^{***}
Rumination/Unforg by God	.....	.034 ^{***}	.034 ^{***}
Rumination/Unforg by Others	.....	.062 ^{***}	.062 ^{***}
Rumination/Unforg by Self	.200^{***}	.....	.200 ^{***}
Depression/Unforg by God	.010	.018 ^{**}	.028
Depression/Unforg by Others	.074 [*]	.033 ^{**}	.107 ^{**}
Depression/Unforg by Self	.035	.073 ^{***}	.108 ^{**}
Depression/Rumination	.364^{***}	.....	.364 ^{***}

Note. "Unforg" refers to Unforgiveness.

* $p < .05$;

** $p < .01$;

*** $p < .001$