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Abstract

Despite recent increased attention to the construct of forgiveness, measures of forgiveness have been limited by inconsistent use of a single operational definition. One measure of forgiveness, the Enright Forgiveness Inventory (EFI), has shown strong psychometric properties in numerous studies and across diverse samples. However, limited research has explored the conceptualization and measurement of the forgiveness process with older adults and caregivers. The current study examined the utility of the EFI within a sample of 118 middle-aged and older female spouses, including a subset of dementia family caregivers (n = 29). Participants completed measures of religious coping, depression, state and trait anger, state and trait anxiety, marital satisfaction, and social desirability. They were also asked to provide a detailed written account of a significant transgression by their husband, and completed the EFI in reference to that specific offense. Transgression descriptions were coded for content by two independent raters, to establish the objective characteristics of transgressions that individuals are considering when responding to the EFI. Caregivers also completed measures assessing current levels of strain as a caregiver and regarding their husbands' cognitive status. Results indicate that caregivers reported more marital distress and less forgiveness as compared to non-caregivers. Forgiveness was negatively correlated to state anger, depression, and state and trait anxiety among the overall sample. Findings of the current study suggest that the EFI has sound psychometric properties when applied to middle-aged and older adult wives in longstanding marriages. The implications of these data for future research on the application of forgiveness to middle-aged and older wives and caregivers are discussed.

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Understanding Forgiveness through the Application and Extension of the Enright Forgiveness Inventory to Older Adult, Female Caregivers and a Community Sample of Older, Female Spouses

Although forgiveness has been explored rather extensively in recent years, it is a construct that requires continued development and exploration amongst unique populations. The construct has been defined in multiple ways, ultimately influencing how psychological research approaches and measures it. To date, several measures of forgiveness have been created, but very few have demonstrated strong psychometric properties and even fewer have been applied to diverse samples. Subsequently, psychological research must enhance the forgiveness literature through the study and extension of its measurement to diverse populations. Such research will allow for a greater understanding of forgiveness, its proposed correlates, and the role of dyadic relationships in the forgiveness process.

Transgressions & Unforgiveness

Forgiveness can only be considered in the context of a perceived transgression. Transgressions have been defined as the "events that people perceive as violating their expectations and assumptions about how they, other people, or the world 'ought to be'" (Thompson et al., 2005, p. 317). Such violations vary in terms of their severity and the hurt that can result, and may be perceived as far worse when enacted by an individual with whom the offended person feels close. The existing relationship may also influence the forgiveness process as the offended person may be more inclined to forgive if he or she believes that the relationship cannot or should not be terminated, such as that with a spouse.

Regardless of the above, transgressions frequently result in negative thoughts, feelings, and behaviors. Consequently, individuals may express anger (Enright & Fitzgibbons, 2000) or demonstrate revenge-seeking behaviors (Newberg, d'Aquili, Newberg, & deMarici, 2000). Such responses reflect awareness that there is dissonance between what one thinks ought to be and what is. A debilitating stress reaction can result from such dissonance, which is considered critical in one's movement toward or away from forgiveness. If one ruminates on the negative feelings associated with a transgression, he or she is said to be experiencing unforgiveness and may suffer from ongoing symptoms of psychopathology (Berry & Worthington, 2001; Witvliet, 2001).

Defining Forgiveness

The understanding of unforgiveness has led researchers to believe that forgiveness must be a process of change that allows one to rid him or herself of the negative thoughts and feelings following a transgression and experience a state of neutrality toward the offender. The forgiveness process is subsequently thought to begin when one recognizes feelings of discomfort following a transgression and confronts the dissonance between *what is* and *what was expected to be* (Janoff-Bulman & Frantz, 1997). Though the understanding of unforgiveness has helped frame that of forgiveness, this latter construct remains quite difficult to define. Despite the fact most theorists have agreed that forgiveness is *not* the same as reconciliation, forgetting, or condoning (Enright & Fitzgibbons, 2000; Harris et al., 2006), the construct has yet to be conceptualized in a unitary fashion (Thompson et al., 2005). Part of the complexity in establishing a single, operational definition may in fact stem from the numerous contexts in which forgiveness is discussed (Toussaint & Webb, 2005).

Within psychology, it is suggested that forgiveness reflects a change in one's response style, such that he or she stops responding negatively and approaches the other in at least a neutral state (Thompson et al., 2005). Specifically, the construct is thought to enhance one's ability "to avoid the painful consequences of holding onto the memory of negative emotions associated with resentment" (Newberg et al., 2000, p. 96). Some suggest that in the process of reducing negative emotions, forgiveness not only results in a neutral state but perhaps in more positive or love-based emotions (Worthington & Wade, 1999). However, the relevance of such love-based emotions is sometimes challenged, as they are not deemed a necessary aspect of forgiveness and seem highly context specific (e.g., within families) (Thompson et al., 2005).

Regardless of whether one believes these positive, love-based emotions are necessary, most agree that forgiveness is rooted in transformation (Enright & Fitzgibbons, 2000). Subsequently, the process of forgiveness serves as a catalyst for additional changes, altering the intrapersonal feelings and behaviors of the offended individual in a manner that reflects meaningful change in one's approach toward the offender (Enright & Fitzgibbons, 2000). Engagement in the forgiveness process, then, is an active choice (Hantman & Cohen, 2010), comprised of multiple components, including neurocognitive and affective processes. It has been suggested that many of these processes are intrapersonal and cannot be directly observed (Thompson et al., 2005). From an intrapersonal perspective, these processes are likely influenced by differences in disposition, with some individuals being more forgiving across situations than others. The overall process of forgiveness allows one to explore the past and present

relationship with the offender, enabling one to engage in a more thorough analysis of his or her present circumstances in the context of other meaningful relationships.

It is unclear how ongoing relationships influence the forgiveness process and to what degree the transgressor can be or should be involved. Specifically, some have argued that because a hurt occurs within a relationship or a dyadic interaction, that the conflict can only be resolved with that relationship *in mind* (Worthington, 1998). Others argue that the transgressor must be present and perhaps even involved in the forgiveness process (Hargrave, 1994). It has been suggested that at the dyadic level, forgiveness creates an environment where reconciliation or the restoration of a relationship *may* take place (Rusbult, Hannon, Stocker, & Finkel, 2005). Forgiveness is then shaped as something which "promotes continuity in interpersonal relationships by mending the inevitable injuries and transgressions that occur in social interaction" (McCullough, 2000, p. 43).

Forgiveness as a dyadic process is thought to be rather complicated given that certain relationships may be more forgiving than others (McCullough & Hoyt, 2002). Furthermore, in some cases the offender may wish to engage in the process with the transgressed (McCullough & Hoyt, 2002). If a relationship is longstanding in nature, it is likely that one will have more regularly occurring anger- and stress-provoking instances simply because of the frequency with which one engages in that relationship. However, such relationships may enhance one's investment in moving beyond a transgression, because it was enacted by an important person in one's life and there have been more opportunities for support reciprocity. Subsequently, some suggest that there is a tendency

to forgive family members more readily compared to nonfamily members (Hantman & Cohen, 2010).

It is thought that perhaps the pain associated with a transgression made by a family member can damage "the balance of justice" (Hargrave, 1994, p. 14). The difficulty associated with forgiveness within the family context is that some may believe it is impossible to terminate the relationship and subsequently experience diminished well-being secondary to negative circumstances. Over time, the offended party may experience a persistent imbalance within the relationship and may view the offender as consistently irresponsible (Hargrave, 1994). Spousal injuries can be more damaging because of the meaningful relationship, but also easier to forgive given a history of trust and love (Newberg et al., 2000). Thus, in the context of familial forgiveness, it has been suggested that the process may enhance one's ability to reestablish trust in the offender and to feel loved within the relationship (Hargrave, 1994).

Proposed correlates of forgiveness. Because forgiveness moves one toward a state of neutrality regarding a transgression, it is believed that the process will result in a variety of benefits (Freedman & Enright, 1996; McCullough, 2000; Thompson et al., 2005). Much of what is thought to be true about forgiveness' potential to enhance well-being is rooted in an understanding of the negative outcomes associated with unforgiveness and stress due to troubled relationships. Research suggests that those involved in distressed relationships will experience increased stress and changes in both physical and mental health (Berry & Worthington, 2001). Thus, it is generally believed that if one forgives there will be significant, positive effects.

Mental health. Research suggests that forgiveness may be a direct correlate of psychological well-being (Mauger et al., 1992; Subkoviak et al., 1995; Witvliet, 2001). When engaging in the forgiveness process, one displays a cognitive flexibility and greater positive affect which will likely reduce levels of rumination, vengeance, and hostility (Thompson et al., 2005). One's personality is clearly important in this context, as those exhibiting greater trait forgiveness will generally be more agreeable (Lawler et al., 2005) particularly when compared to those who tend to ruminate or exhibit greater trait anger.

Forgiveness has been noted to predict several components of psychological well-being, including lower levels of anger, depression, and anxiety (Thompson et al., 2005). Additionally, trait forgiveness, even at low levels, is thought to influence attitudes of vengeance and be inversely related to depressive symptoms. With regard to anxiety, older females engaged in forgiveness interventions have demonstrated a decrease in anxious symptoms (Hebl & Enright, 1993; Thompson et al., 2005). Older women who have demonstrated higher levels of forgiveness have also reported higher levels of subjective well-being (Lawler-Row & Piferi, 2006). The reduction of anxious and depressive symptoms, secondary to forgiveness, may also allow individuals to more fully engage in the forgiveness process.

Spiritual peace. Forgiveness is thought to provide some with spiritual benefits, including spiritual peace and the experience of added meaning in one's life (McCullough et al., 1997). In a study of older adult women, those who reported greater forgiveness were noted to report higher levels of religious and existential well-being (George, Larson, Koenig, & McCullough, 2000). Such well-being and spiritual peace may also enhance one's ability to explore and reduce day-to-day concerns in a more meaningful manner,

recognizing that there is more to life than the present (McCullough et al., 1997). Further peace may be experienced if individuals feel that they have greater opportunity to reenter into a relationship, and reestablish meaningful bonds. In doing so, people may feel more at peace with their religious faith as some believe that God will love and bless a person who takes on the role of "forgiver" (Newberg et al., 2000). Subsequently, it has been suggested that religious coping is intentional behavior, which is the byproduct of spirituality and one's religious practices (Klaassen, Graham, & Young, 2009). Moreover, it is believed that religious coping occurs within a social context and that it is intended to aid in the process of coping with distress (Klaassen, et al., 2009).

Interpersonal healing. Though reconciliation is not a necessary or assumed step of forgiveness, some believe that it may be a benefit of the process. Thus, the forgiveness process can aid distressed relationships through interpersonal healing between the transgressor and the offended individual. It is suggested that such healing can occur at any time, and that if both parties are interested, forgiveness can make a relationship whole again (Byock, 2005). Such healing is said to be possible even when saying goodbye to a dying individual; the notion under such circumstances is that forgiveness leaves nothing unsaid between two parties (Byock, 2005). Subsequently, four statements have been suggested ("Please forgive me," "I forgive you," "Thank you," and "I love you") which may heal distressed relationships (Byock, 2005).

If mutual investment in the forgiveness process does not exist, the forgiver may still benefit from interpersonal healing, as he or she may be more involved in prosocial acts such as cooperative relationship-maintenance behaviors (Rusbult et al., 2005). Other relationships could subsequently be enhanced; individuals might find that they have a

greater social circle or social support might be more easily given to the forgiver (Newberg et al., 2000; Rusbult et al., 2005). Generally, those who are involved in the forgiveness process are reported to have greater commitment, trust, and satisfaction within relationships (McCullough et al., 1997).

Implications of Demographic Variables on Forgiveness. Some have suggested that despite the benefits of the forgiveness process and the response to forgiveness measures may be influenced by demographic factors. For example, previous research has suggested that women have a greater capacity for forgiveness (Hantman & Cohen, 2010; Oranthinkal, 2008; Worthington, Sandage, & Berry, 2000). Additionally, the relationship between age and forgiveness has been investigated with mixed results. Some research has shown that age is positively correlated with forgiveness, as older individuals have a greater tendency to forgive (Bono & McCullough, 2004; Toussaint, Williams, Musick, and Everson, 2001). However, more recent research has not shown age to be a meaningful factor in forgiveness and it has been argued that exploring the responses of the young-old compared to old-old is critical in understanding how age influences the forgiveness process (Hantman & Cohen, 2010).

Relevance of the Forgiveness Process to Caregivers

In addition to these demographic issues, limited research has explored the role of the offender in the process. The focus of forgiveness-related research has been primarily on non-dying individuals who have caused hurt, such as spouses or ex-spouses (Reed & Enright, 2006). Limited forgiveness research has explored the impact of the process on older adult spouses, and even less has been done with older adult, familial caregivers. This latter group is an interesting population to study because of the ways in which their

experiences could influence or be influenced by forgiveness, particularly depending upon the availability of their spouses to engage in a dyadic forgiveness process. Some believe that individuals are more likely to forgive the transgressor as a function of their commitment to the offender, recognizing that the "most primitive component of commitment is simple intent to persist, or the decision to remain dependent on a partner" (Finkel, Rusbult, Kumashiro, & Hannon, 2002). Moreover, much of what is known about the benefits of the forgiveness process is based on stress research and aside from the transgression, does not take further change in one's lifestyle into account; the forgiveness process may become prolonged or more complicated given a change in spousal responsibilities or the grieving over a dying loved one.

When considering the complex nature of family processes, it has become apparent that forgiveness may be more frequently sought within intimate relationships (Hargrave, 1994). Therefore, given that familial caregivers have such regular contact with the care recipient, they may feel more obligated to try and forgive, the transgressor may try to force forgiveness if he or she recognizes the offense, or the caregiver and transgressor may truly want to engage in a dyadic forgiveness process because both hope to restore a loving and trusting relationship. The caregiving context also has implications regarding the timing of forgiveness. It is unclear how forgiveness might benefit those providing care to someone suffering from a chronic and progressive disease, as such individuals will likely require longer maintenance of the relationship.

Many family caregivers report negative feelings that include regret about unresolved issues (Waldrop, 2007) which may become more salient with the expected loss of a relative. Family caregivers also face an extraordinary number of personal

challenges, including negative physical and mental health outcomes (Pinquart & Sorenson, 2005; Schulz & Martire, 2004; Vitaliano, Zhang, & Scanlan, 2003). Caregivers frequently experience "a state of heightened responsiveness during end-stage care" which can include feelings of anxiety, depression, hostility, difficulty concentrating, trouble recalling information, and a diminished ability to complete tasks (Waldrop, 2007, p. 197). These negative experiences may be exacerbated by prior transgressions, and negative affect directed toward the process could result in increased poor health responses.

Dementia caregivers. Family caregivers who are assisting a spouse with a diagnosis of dementia are faced with many challenges. Dementia caregivers engaged in a significant number of hours of caregiving experience the burden of self-sacrifice and a longing for how life once was (Hansson & Stroebe, 2007). Dementia caregivers also frequently report a sense of overload and depression as they take on greater responsibilities and watch family members decline (Teel, Press, Lindgren, & Nichols, 1999). As the spouse deteriorates, the caregiver will face multiple losses (Aneshensel, Botticello, & Yamamoto-Mitani, 2004). Feelings of grief, loss and depression may be exacerbated by the problematic behaviors and demands of the ill individual. The dementia patient will likely require more extensive care in several domains (e.g., communication with others, handling of finances, assistance with mental tasks, personal hygiene, ambulation, etc.), and may engage in disruptive actions (e.g., wandering, yelling, refusing treatment, incessant questioning, disrupting the work of others, and crying) (Beers & Jones, 2005). For the caregiver who has entered his or her new role with negative feelings resulting from an old transgression, such neurocognitive changes may be viewed as more frustrating.

The most common dementia, Alzheimer's disease, is a terminal condition. Just as the disease process slowly impacts the care recipient, it will also change the relationship between caregiver and patient in a very meaningful way. However, caregivers may not recognize this early in the disease process and such changes may become more salient later on. In later stages of the disease, the care recipient will eventually be unable to communicate, even regarding shared memories. Therefore, the care recipient or the offender may not recall the mistakes or offenses previously made. The transgressor's lack of insight would then perhaps alter the forgiveness process as he or she would be unable to discuss the hurt or engage in a dyadic process with the victimized caregiver. When working under the assumption that forgiveness occurs in dyads or with a relationship in mind (Worthington, 1998), it is unclear how such lack of discussion might alter the process or limit the benefits. This presents new and unique challenges for the forgiveness literature.

Implications of Linking the Forgiveness & Caregiving Literature

Because the caregiving experience can vary greatly and the construct of forgiveness is not yet well-defined, it remains unclear how these two processes might influence each other. Though some may perceive caregiving as burdensome, it is important to recognize that in this instance, transgressions are *not* being conceptualized as the result of the caregiving process. Instead, the exploration of forgiveness as it relates to caregiving will be rooted in offenses that took place prior to the establishment of the caregiving role. Although researchers have not directly explored the forgiveness process amongst caregivers, it is an important domain to consider. Many caregivers report satisfaction associated with their caregiving responsibilities (Farran, Keane-Hagerty,

Salloway, Kupferer, & Wilken, 1991). However, for the caregiver burdened by a previous transgression(s), feelings of resentment may precluded him or her from engaging in the caregiving process in a fulfilling manner. Such caregivers might benefit from the interpersonal healing and enhanced well-being that is thought to occur secondary to the forgiveness process. Specifically, forgiveness may reduce pre-existing tensions that burden the relationship, thereby making the caregiving experience less complex, demanding and tiresome.

In order to understand whether such healing can take place, it is also critical to explore the relationship which presupposed an interaction based on caregiving. One must consider whether the interactions between spouses were generally viewed as positive or if a marital relationship has previously suffered from numerous transgressions. Such factors are important because they give insight into a family's approach to one another and the space that may or may not exist for the forgiveness process to occur. In addition to the past relationship, current research must also thoroughly explore the involvement of others in the forgiveness process. When considering caregivers, the care recipients' role may vary greatly based on the type and severity of the illness. If one assumes that the process of forgiveness is in fact dyadic and involves direct communication and processing with the other (Hargrave, 1994), then the care recipient's role would be critical in the process of change. However, just because a care recipient is alive does not mean that he or she is cognitively or emotionally available to aid in the forgiveness process. Despite this, it is unknown if benefit can simply be derived from the other's physical presence as may often be the case in late stage dementia.

Measurement of Interpersonal Forgiveness

Although efforts have been made to conceptualize the forgiveness process, having a strong measure is necessary in order to enhance the literature. Forgiveness measures aid researchers in assessing the degree to which forgiveness has occurred in response to a single transgression. Though some such measures exist, they have infrequently been applied to diverse populations, making it difficult to know whether such measures adequately explore forgiveness in a generalizable fashion. The measurement of forgiveness has also proven to be quite complex because assessment tools tend to reflect the several definitions of the construct, and not all necessarily explore the same thing (e.g., some distinguish between forgiveness and reconciliation, but others do not).

Early measures of forgiveness were quite simple, primarily assessing behaviors of forgiveness and ignoring other critical components of the process. Such measures focused on the degree to which one was able to manage behaviors, not engaging in actions reflective of retaliation toward the offender (Brown, Rosik, Gorsuch, & Ridley, 2001). Over the last decade, others began to recognize the multidimensional nature of the construct and many efforts have been made to establish a tool that adequately assesses forgiveness. Subsequently, newer measures have focused on the assessment of interpersonal forgiveness as evidenced in affect, cognition, and behavior.

One of the most comprehensive measures to date is the Enright Forgiveness Inventory (EFI) (Subkoviak et al., 1995). The EFI assumes that a respondent has suffered from a personal injustice, and that having forgiven the transgressor, he or she will demonstrate the absence of negative affect, thoughts, or behaviors (Enright & Fitzgibbons, 2000). The initial scale consisted of 150 items and was labeled the "Attitude

Scale" so that the nature of the assessment would not be as apparent to respondents. The scale explored the absence of negative affect, cognition, and behavior regarding a specific transgression; additionally, the measure assessed for the presence of positive responses in the same three domains. Through item analysis, the measure was reduced to 60 items that were divided into 6 subscales, each comprised of 10 items and assessing the same domains as that explored in the original measure. The 60-item EFI is based on a 6-point Likert scale (from *strongly disagree* (1) to *strongly agree* (6)). All of the items which reflect negative content are reverse scored. Scores range from 60 to 360, with higher scores reflecting greater forgiveness being offered to the transgressor (Subkoviak et al. 1995).

The six subscales of the EFI are positive affect (e.g., goodwill toward the offender), negative affect (e.g., feelings of repulsion or resentment), positive behavior (e.g., showing consideration for the other), negative behavior (e.g., avoidance of the offender), positive cognition (e.g., thoughts that the other is kind), and negative cognition (e.g., thoughts that the other is bad); the subscales are presented in this order. Items for each subscale were selected if they correlated above 0.65 with the corresponding scale. A confirmatory investigation of the factor analytical structure was conducted to clarify whether the subscales of the EFI loaded on a common factor; findings supported that the EFI is a unidimensional structure (Enright & Rique, 2004). Subsequently, the creators suggest that the measure be presented in its entirety and that subscales not be administered separately, as the measure is intended to reflect a homogenous construct that consists of multiple facets.

The measure also includes a five item pseudoforgiveness scale, which is scored separately from the primary items. The pseudoforgiveness scale was created in an effort to explore the degree to which respondents truly forgive without excusing or condoning the transgression. Should someone attain a score of 20 or more on the pseudoforgiveness scale, the creators suggest that the individual's reported forgiveness is not as genuine as that demonstrated by others and may reflect condoning of the offense (i.e., thus minimizing the need for forgiveness; Enright & Fitzgibbons, 2000).

In an initial study of the EFI, the measure demonstrated strong internal consistency (Cronbach's alpha = .98) (Subkoviak et al., 1995). The EFI's construct validity was assessed by asking participants (N = 394) to answer "To what degree have you forgiven the person whom you identified on the Attitude Scale?". Results of correlation analyses were suggestive of strong construct validity (r = .68), though the one-item scale limited the maximum attainable construct validity coefficient to 0.70 (Enright & Fitzgibbons, 2000). Although the initial study of the EFI suggested that the measure did not generally correlate with reported anxiety when individuals were hurt by close family members or partners, there was a moderate negative relationship between forgiveness and state anxiety (Subkoviak et al., 1995). The study also assessed test-retest reliability with a sample of 36 college students after 2 weeks. The correlation between Time 1 and Time 2 for the entire scale was .86 (Enright & Fitzgibbons, 2000).

The instructions of the EFI are flexible and can be tailored to meet the specific needs of a study. For example, the instructions can be changed appropriately to inform respondents that questions are being asked about a particular individual, such as a spouse. Additionally, the measure is thought to be appropriate across cultures and diverse

religions based on several studies that have assessed the measure's usefulness (Enright & Fitzgibbons, 2000). Though the EFI is helpful in assessing the degree of forgiveness that has occurred, it and other forgiveness measures do not allow researchers to understand how the reported degree of forgiveness might relate to a greater, overall process of forgiving (Enright & Fitzgibbons, 2000).

The Current Study

Although a great deal of research has recently been conducted regarding forgiveness, very little is known about the construct as it relates to unique populations, such as older spousal couples and family caregivers. Subsequently, little is known about the usefulness of forgiveness measures when working with these particular populations. Additionally, limited research has been undertaken to assess the relationship between forgiveness and its correlates amongst unique groups. The current study extends the forgiveness literature through the application and exploration of the utility of the Enright Forgiveness Inventory (EFI) amongst an understudied population.

Specifically, the current study examined the relationship between forgiveness as measured on the EFI and its proposed correlates in regard to two groups: (1) a group of non-caregiving wives, and (2) a group of caregiving wives. The sample included both middle-aged and older adult women, and explored the relationship between forgiveness and age, as research has previously demonstrated higher levels of trait forgiveness in older females when compared to younger populations (Toussaint, Williams, Musick, and Everson, 2001). Additionally, the study's qualitative component allowed for brief analyses of the objective characteristics of transgressions as reported by the current participants.

Enright Forgiveness Inventory Psychometric Properties Predictions. It was predicted that participants from a caregiving sample and a spousal sample would respond similarly to items on the Enright Forgiveness Inventory (EFI), resulting in similar psychometric properties and supporting the utility of the EFI amongst an older spousal population. For example, the means, distributions (e.g., range, skew), and internal consistency (i.e., Cronbach's alpha of 0.80 or above) would be similar between the two groups. Quantitative analyses were conducted in order to explore the overall utility of the EFI within the two groups. Further analyses were then conducted to explore forgiveness scores in relation to the proposed correlates.

Hypotheses

Given the limited forgiveness research with these groups of caregiving and non-caregiving older wives, it is hypothesized that:

1. Higher feelings of mutuality within the relationship will be positively associated with higher levels of forgiveness for both a caregiver sample and non-caregiver sample.
2. Higher total scores on the EFI will be negatively associated with anger, depression, and anxiety for both a caregiver sample and non-caregiver sample.
3. Higher levels of positive religious coping will be positively associated with higher levels of forgiveness for both a caregiver sample and a non-caregiver sample.
4. Higher scores on the pseudoforgiveness scale embedded in the EFI will be positively associated with higher levels of social desirability, as expressed in the conventionalism scale (Snyder, 1997), for both a caregiver sample and non-caregiver sample.

Methodology

Participants

Group 1: Non-Caregiver Spousal Sample. Participants included in the non-caregiving spousal group were female members of a community sample, residing with a non-demented spouse. A portion of this sample included women who had previously participated in research in 2006. The 2006 project was funded by a Community Outreach Partnership Center grant from the Department of Housing and Urban Development (HUD), and involved needs assessment, outreach, and community-wide education about aging issues. Specific goals of the project included promotion of community access to information about Aging in Place, increasing access to local senior services, and development of activities to promote volunteerism. At that time, 2,096 registered voters over the age of 65 and living in a suburban neighborhood of St. Louis County (Affton) were randomly selected to participate. Three-hundred three individuals participated in the 2006 study and provided consent to be contacted regarding future research opportunities.

Those 303 individuals were contacted and invited to participate in the current study; they were recruited at random with the intent of discontinuing recruitment when a sufficient number had been recruited. Of those 303 individuals, we were able to contact 163 families. Of those, 17 wives were reported to be deceased or diagnosed with dementia, and 80 women were not considered eligible (62 widowed, 13 living alone, 5 divorced). Of those who qualified, 29 agreed to participate and 21 completed the survey; of those who did not complete the survey, 4 reported that their husbands had died in the interim, 2 reported that the survey was too laborious, and 2 could not be reached for follow-up.

Group 2: Caregivers. Caregiving participants for the study were derived from a group of female, spousal caregivers over the age of 50, a portion of whom were initially recruited through the St. Louis Alzheimer's Association (n = 8). Caregivers were required to reside with their spouse, who had a physician-confirmed diagnosis of dementia; the stage of dementia of each care recipient was determined by having spouses complete a measure of cognitive status. Spousal caregivers were notified of the current study by the St. Louis Alzheimer's Association and were encouraged to contact the primary investigator if they were interested in further information.

Additional Online Participants. Given the need for additional participants, a modification to the proposed study was made to add an online format. The online format was intended to recruit individuals from a broader geographic and demographic background, and was open to all women over the age of 50 who were residing with their spouses. The online format was sent to multiple non-profit online organizations that agreed to share the survey link with their members. A total of 102 women completed the online survey, with 22 wives reporting that they were caregivers to their husbands with physician confirmed diagnoses of dementia and 80 reporting that they were not caregivers. An additional 1,498 individuals viewed the survey website but did not sign the consent and were subsequently unable to or chose not to complete it.

Summary of Participants. A total of 131 female spouses completed the consent and research survey. A total of 30 were caregivers, and the other 101 individuals were non-caregiving wives. Of those 131 completed, 102 were completed online and 29 completed the hard copy format. Data from 9 non-caregiving spouses were removed from analyses as they did not complete 65% or more of the survey. An additional 4 participants

(1 caregiver and 3 non-caregivers) were removed from analyses after running an initial screening; specifically, Mahalanobis Distance was calculated and revealed 4 sets of responses that were multivariate outliers on 4 or more scales. Thus, the final study samples were n = 89 non-caregivers and 29 caregivers (N = 118).

Comparison of Participants and Non-Participants. Of those participants whose responses were not included in the final analyses, all 13 provided their demographic information, allowing for comparison between those included in the main analyses (N = 118) versus those removed (labeled "non-participants"). Table 1 displays demographic data as a function of participant status.

Two-way contingency table analyses (Pearson chi-squared test of association) were conducted to evaluate whether participants and non-participants systematically differed in frequency for demographic categorical variables. For the ethnicity variables, only the categories with Caucasian and African American wives were compared, as all other categories had small expected cell frequencies (< 5) in violation of the assumption of the chi-squared test (Howell, 2002). This strategy required the removal of .8% of wives (1 of 131) from the contingency table analyses. Participation status (i.e., participant or non-participant) and race were not found to be significantly related. The same approach was used with regard to education, resulting in the removal of 23.08% of wives (3 of 13); participation status and education were not found to be significantly related. For the current employment variable, only the category of full-time employment was considered, as all other categories had small expected cell frequencies (< 5) in violation of the assumption of the chi-squared test (Howell, 2002). Participation status was significantly related to current employment status, Pearson χ^2 (5, N = 131) = 17.77, p <

.001, with non-participants reporting higher rates of full-time employment (61.5%) compared to participants (32.2%).

Additionally, independent t-tests were used to compare participants and non-participants on continuous variables, with Cohen's d as the indicator of effect size. Cohen's effect size value (d = -1.69) indicated a large difference between the two groups regarding household size, with non-participants reporting a greater number of people living in the household (M = 3, SD = 1.29) than participants (M = 2.36, SD = .84). Cohen's effect size value (d =1.49) also reflected a large difference between groups in terms of the length of marriage, with non-participants reporting marriages of shorter duration (M = 14.38, SD = 2.22) than participants (M = 32.48, SD = 17.09). Also of interest was that all non-participants terminated completion of the survey when they were asked to provide a narrative statement regarding a past hurt, completing all measures up until that point.

Comparisons of Hard Copy vs. Online Participants. Two-way contingency table analyses were also conducted to evaluate whether there were systematic differences between participants completing a hard copy (n = 30) or online (n = 88) format of the survey (Table 2). Analyses indicated that online versus hard copy participants systematically differed in frequency for demographic categorical variables. Specifically, the method of completion was significantly related to current employment status, Pearson χ^2 (5, N = 118) = 20.94, p < .001, with online participants reporting higher rates of current, active employment (56.8%) compared to those who completed the hard copy (16.6%). Additionally, analyses reflected a significant difference in income between these two groups, Pearson χ^2 (7, N = 118) = 23.45, p < .001, with those completing the

online format reporting significantly higher income ($70K or more, 55.7%) than those completing the hard copy (23.3%). Analyses also indicated that the average length of marriage was different between these two groups, as evidenced by a Cohen's d of -1.25, with those completing the online format reporting a lower average of years married (M = 27.52, SD = 14.15) than those completing the hard copy (M = 47.03, SD = 16.87).

Table 1

Participation Status Comparison Demographic Information (N=131)

	Non-Participant (n = 13)	Participant (n = 118)
Variables	n (%)	n (%)
Survey Format		
Hard copy	0 (0.00)	30 (25.40)
Online	13 (100.00)	88 (74.60)
Total	13 (100.00)	118 (100.00)
Caregiver Status		
Caregiver	0 (0.00)	29 (24.58)
Non-Caregiver	13 (100.00)	89 (75.42)
Total	13 (100.00)	118 (100.00)
Ethnicity		
Caucasian	13 (100.00)	104 (88.10)
African American	0 (0.00)	13 (11.00)
Native American	0 (0.00)	0 (0.00)
Asian	0 (0.00)	0 (0.00)
Hispanic	0 (0.00)	0 (0.00)
Bi/Multi-Racial	0 (0.00)	1 (0.90)
Other	0 (0.00)	0 (0.00)
Total	13 (100.00)	118 (100.00)
Education		
No Formal Education	0 (0.00)	0 (0.00)
Less than High School	0 (0.00)	1 (0.80)
Some High School	0 (0.00)	7 (5.90)
High School Graduate	2 (15.40)	27 (22.90)
Vocational	0 (0.00)	10 (8.50)
Some College	3 (23.10)	32 (27.10)
College Graduate	5 (38.50)	23 (19.50)
Masters Degree	0 (0.00)	14 (11.90)
Doctoral Degree	0 (0.00)	4 (3.40)
Total	10 (77.00)	118 (100.00)

Table 1 (continued)

Employment*		
Full-Time	8 (61.50)	38 (32.20)
Part-Time	2 (15.40)	17 (14.40)
Homemaker (no pay)	3 (23.10)	12 (10.20)
Retired	0 (0.00)	44 (37.30)
Unemployed	0 (0.00)	6 (5.10)
Total	13 (100.00)	118 (100.00)
Country of Origin		
United States	13 (100.00)	112 (94.90)
Canada	0 (0.00)	1 (0.80)
Other	0 (0.00)	5 (4.20)
Total	13 (100.00)	118 (100.00)
Difficulty Paying for Basics		
Not Difficult at All	4 (30.80)	61 (51.70)
Not Very Difficult	5 (38.50)	31 (26.30)
Somewhat Difficult	3 (23.10)	22 (18.60)
Very Difficult	1(7.70)	4 (3.40)
Total	13 (100.00)	118 (100.00)
Annual Household Income		
Not Reported	0 (0.00)	2 (1.70)
Less than $5,000	0 (0.00)	0 (0.00)
$5,000 to $9,999	0 (0.00)	1 (0.80)
$10,000 to $14,999	0 (0.00)	0 (0.00)
$15,000 to $19,999	1 (7.70)	1 (0.80)
$20,000 to $29,999	5 (38.50)	3 (2.50)
$30,000 to $39,999	2 (15.40)	17 (14.40)
$40,000 to $49,999	3 (23.10)	13 (11.00)
$50,000 to $59,999	2 (15.40)	12 (10.20)
$60,000 to $69,999	0 (0.00)	13 (11.00)
$70,000 or more	0 (0.00)	56 (47.50)
Total	13 (100.00)	118 (100.00)

*Significant Pearson Chi Square value ($p < .05$) between participants and non-participants

Table 2

Survey Format Comparison Demographic Information (N = 118)

	Online (n = 88)	Hard Copy (n = 30)
Variables	n (%)	n (%)
Caregiver Status		
Caregiver	21 (23.90)	8 (26.70)
Non-Caregiver	67 (76.10)	22 (73.30)
Total	88 (100.00)	30 (100.00)
Ethnicity		
Caucasian	77 (87.50)	27 (90.00)
African American	10 (11.40)	3 (10.00)
Native American	0 (0.00)	0 (0.00)
Asian	0 (0.00)	0 (0.00)
Hispanic	0 (0.00)	0 (0.00)
Bi/Multi-Racial	1 (1.10)	0 (0.00)
Other	0 (0.00)	0 (0.00)
Total	88 (100.00)	30 (100.00)
Education		
No Formal Education	0 (0.00)	0 (0.00)
Less than High School	0 (0.00)	1 (3.30)
Some High School	7 (7.90)	0 (0.00)
High School Graduate	17 (19.30)	10 (33.30)
Vocational	6 (6.80)	4 (13.30)
Some College	21 (23.90)	11 (36.70)
College Graduate	20 (22.70)	3 (10.00)
Masters Degree	13 (14.80)	1 (3.30)
Doctoral Degree	4 (4.50)	0 (0.00)
Total	88 (100.00)	30 (100.00)
Employment*		
Not Reported	1 (1.10)	0 (0.00)
Full-Time	34 (38.60)	4 (13.30)
Part-Time	16 (18.20)	1 (3.30)
Homemaker (no pay)	6 (6.80)	6 (20.00)
Retired	25 (28.40)	19 (63.30)
Unemployed	6 (6.80)	0 (0.00)
Total	87 (98.90)	30 (100.00)

Table 2 (continued)

Country of Origin		
United States	83 (94.30)	29 (96.70)
Canada	0 (0.00)	1 (3.30)
Other	5 (5.70)	0 (0.00)
Total	88 (100.00)	30 (100.00)
Difficulty Paying for Basics		
Not Difficult at All	45 (51.10)	16 (53.30)
Not Very Difficult	22 (25.00)	9 (30.00)
Somewhat Difficult	17 (19.30)	5 (16.70)
Very Difficult	4 (4.50)	0 (0.00)
Total	88 (100.00)	30 (100.00)
Annual Household Income		
Not Reported	0 (0.00)	2 (6.70)
Less than $5,000	0 (0.00)	0 (0.00)
$5,000 to $9,999	0 (0.00)	1 (3.30)
$10,000 to $14,999	0 (0.00)	0 (0.00)
$15,000 to $19,999	1 (1.10)	0 (0.00)
$20,000 to $29,999	1 (1.10)	2 (6.70)
$30,000 to $39,999	14 (15.90)	3 (10.00)
$40,000 to $49,999	5 (5.70)	8 (26.70)
$50,000 to $59,999	7 (8.00)	5 (16.70)
$60,000 to $69,999	11 (12.50)	2 (6.70)
$70,000 or more	49 (55.70)	7 (23.30)
Total	88 (100.00)	28 (93.30)

Participant Sample Characteristics. In the overall sample (N = 118), wives' ages ranged from 51 to 88 (M = 64.83, SD = 9.71). Wives in this sample were predominantly Caucasian (88.1%), and many were highly educated, with 34.8% having completed a college education or greater. Participants reported that husbands ranged in age from 39 to 91 (M = 67.57, SD = 10.90). They also tended to be Caucasian (87.3%), and the majority were highly educated (42.4% completed college or more). The length of years married ranged from 1 to 66 (M = 32.48, SD = 17.09).

Table 3 displays sample characteristics as a function of caregiving status. Non-caregiving wives were predominately Caucasian (96.6%), and many were highly

educated with 38.3% having completed a college education or more. The majority reported their health to be good to excellent (87.7%). With regard to their husbands, they described them as also primarily Caucasian (95.5%). Husbands not receiving care also tended to be in good to excellent health (79.9%) based on their wives' report.

Caregiving wives tended to be Caucasian (62.1%), with a good portion of those being highly educated (24% having completed college or more), retired (48.3%), and generally in "good" health (48.3%). Caregiving wives reported that their husbands, all with a physician-confirmed diagnosis of dementia, were predominately Caucasian (62.10%), and generally in poor to fair health (62%). With regard to the nature of the dementia diagnosis, 31% of caregiving wives reported their husbands had been diagnosed with a vascular dementia or stroke, and 37.9% reported their husbands had a diagnosis of Alzheimer's disease.

Caregivers and non-caregivers (Table 3) differed significantly on their length of education, Pearson χ^2 (9, N = 118) = 33.08, $p < .001$, with caregivers reporting less education (less than 'some college', 58.6%) than non-caregivers (31.4%). For the ethnicity variables, only the categories with Caucasian and African American were compared, as all other categories had small expected cell frequencies (< 5). This strategy required the removal of .8% of wives (1 of 118) from the contingency table analyses. Results of the analyses suggested significant differences between caregivers and non-caregivers, Pearson χ^2 (1, N = 118) 22.56, p =.00, with non-caregivers being predominantly Caucasian (96.6%) compared to caregivers (62.1%). Additionally, there is a significant difference in income reported Pearson χ^2 (7, N = 118) 31.50, $p < .001$, with non-caregivers reporting higher income. Furthermore, the ability to pay for basic

expenses was significantly different, Pearson χ^2 (3, N = 118) 35.98, p < .001, with caregivers reporting greater difficulty with household finances (Table 3). Caregivers and non-caregivers also reported significantly different perceptions regarding their own health, Pearson χ^2 (4, N = 118) 12.49, p = .01), with caregivers reporting poorer health for themselves (20.7% reported poor to fair health) as compared to non-caregivers (87.7% reported good to excellent health) and their husbands. Similarly, there were significantly different perceptions of their husbands' health, Pearson χ^2 (4, N = 118) 21.82, p < .001, with caregivers reporting their husbands to be in poor to fair health (62%) compared to non-caregivers who generally reported their husbands were in good to excellent health (79.9%).

Given the modification to the original proposed study to include women both middle-aged and older, analyses were conducted to assess the relationship between forgiveness and age to determine if this particular demographic variable might affect the overall findings. Pearson correlations did not reveal a significant, linear relationship between age and overall forgiveness scores, $r(116) = .02$, p = .87, or age and subcomponents of the forgiveness construct (e.g., affect, behavior, and cognition) of the EFI (Table 4).

Table 3

Caregiver Status Comparison Demographic Information (N = 118)

	Caregivers (n = 29)	Non-Caregivers (n = 89)
Variables	N (%)	N (%)
Ethnicity		
Caucasian	18 (62.10)	86 (96.60)
African American	10 (34.50)	3 (3.40)
Native American	0 (0.00)	0 (0.00)
Asian	0 (0.00)	0 (0.00)
Hispanic	0 (0.00)	0 (0.00)
Bi/Multi-Racial	0 (0.00)	0 (0.00)
Other	1 (3.40)	0 (0.00)
Total	29 (100.00)	89 (100.00)
Education		
No Formal Education	0 (0.00)	0 (0.00)
Less than High School	0 (0.00)	1 (1.10)
Some High School	7 (24.10)	0 (0.00)
High School Graduate	4 (13.80)	23 (25.80)
Vocational	6 (20.70)	4 (4.50)
Some College	5 (17.20)	27 (30.30)
College Graduate	3 (10.30)	20 (22.5)
Masters Degree	3 (10.30)	11 (12.40)
Doctoral Degree	1 (3.40)	3 (3.40)
Total	29 (100.00)	89 (100.00)
Employment		
Full-Time	5 (17.20)	33 (37.10)
Part-Time	4 (13.80)	13 (14.60)
Homemaker (no pay)	4 (13.80)	8 (9.00)
Retired	14 (48.30)	30 (33.70)
Unemployed	2 (6.90)	4 (4.50)
Total	29 (100.00)	89 (100.00)
Country of Origin		
United States	28 (96.60)	84 (94.40)
Canada	0 (0.00)	1 (1.10)
Other	1 (3.40)	4 (4.50)
Total	29 (100.00)	89 (100.00)
Difficulty Paying for Basics		
Not Difficult at All	7 (24.10)	54 (60.70)
Not Very Difficult	4 (13.80)	27 (30.30)
Somewhat Difficult	15 (51.70)	7 (7.90)
Very Difficult	3 (10.30)	1 (1.10)
Total	29 (100.00)	89 (100.00)

Table 3 (continued)

Annual Household Income		
Not Reported	0 (0.00)	2 (2.20)
Less than $5,000	0 (0.00)	0 (0.00)
$5,000 to $9,999	0 (0.00)	1 (1.10)
$10,000 to $14,999	0 (0.00)	0 (0.00)
$15,000 to $19,999	0 (0.00)	1 (1.10)
$20,000 to $29,999	1 (3.40)	2 (2.20)
$30,000 to $39,999	11 (37.90)	6 (6.70)
$40,000 to $49,999	6 (20.70)	7 (7.90)
$50,000 to $59,999	5 (17.20)	7 (7.90)
$60,000 to $69,999	3 (10.30)	10 (11.20)
$70,000 or more	3 (10.30)	53 (59.60)
Total	29 (100.00)	89 (100.00)
Health		
Poor	0 (0.00)	2 (2.20)
Fair	6 (20.70)	9 (10.10)
Good	14 (48.30)	24 (27.00)
Very Good	9 (31.00)	34 (38.20)
Excellent	0 (0.00)	20 (22.50)
Total	29 (100.00)	89 (100.00)
Husbands' Health		
Poor	7 (24.10)	5 (5.60)
Fair	11 (37.90)	13 (14.60)
Good	8 (27.60)	28 (31.50)
Very Good	1 (3.40)	28 (31.50)
Excellent	2 (6.90)	15 (16.90)
Total	29 (100.00)	89 (100.00)
Dementia Diagnosis		
Alzheimer's Disease	11 (37.90)	0 (0.00)
Lewy Body Dementia	2 (6.90)	0 (0.00)
Vascular Dementia/Stroke	9 (31.00)	0 (0.00)
Parkinson's Disease	2 (6.90)	0 (0.00)
Unspecified	5 (17.20)	0 (0.00)
Total	29 (100.00)	0 (0.00)

Table 4

Correlation Matrix of Variables for Age and Forgiveness

	Age	Affect	Behavior	Cognition	EFI Total
Age	1				
EFI: Affect	.00	1			
EFI: Behavior	-.02	.74**	1		
EFI: Cognition	.06	.60**	.63**	1	
EFI: Total	.02	.91**	.89**	.83**	1

**Correlation is significant at the 0.01 level (2-tailed).

Measures

This section will include a brief description of the measures utilized in the current study, along with an evaluation of the psychometric properties of each measure as applied to the overall sample and the two subgroups (caregivers and non-caregivers). More detailed information, specifically data that is relevant to the study's hypotheses, will be presented in the Results section of the paper.

Demographic questionnaire. Participant demographic information was obtained using a self-report questionnaire that included information about each participant's age, race, ethnic background, religion, educational level, income and financial status, years married, work status, and number of people residing in the household. Additionally, participants were asked to report on the general level of health of the spouse, and perceived level of personal health. For those in the caregiver group, additional questions were asked regarding the length of the care recipient's illness (e.g., length since physician confirmed diagnosis), and if they perceived themselves as primary or secondary caregiver of the care-recipient.

Brief RCOPE. The Brief RCOPE (Pargament, Smith, Koenig, & Perez, 1998) is a 14-item measure adapted from the full RCOPE (a 17-factor validated measure), which is intended to assess religious coping methods and is based on a 4-point Likert scale (*0 = not at all, 3 = a great deal*). Specifically, the measure explores participants' positive religious coping strategies, and negative religious coping strategies. A maximum of 21 points can be scored on each scale. Each scale of the measure is said to have good internal consistency (Cronbach's alpha = 0.81 for the negative scale and 0.90 for the positive scale) with diverse samples (Pargament et al., 1998). The positive scale demonstrated excellent internal consistency in the current study (Cronbach's alpha of .96), with commensurate findings for both the caregiving (Cronbach's alpha = .95) and non-caregiving (Cronbach's alpha = .96) samples. Additionally, preliminary results revealed that the Brief RCOPE Positive Component was slightly, negatively skewed and kurtotic (Table 5). The frequency and range of scores on this measure is generally consistent with previous findings (Pargament, Feuille, & Burdzy, 2011) and there was no evidence of multivariate outliers. No transformation was completed to allow for greater interpretability of the main analyses.

Though the negative scale demonstrated good internal consistency for the overall sample in the current study (Cronbach's alpha of .83), the findings reflect a lack of measurement equivalence for the two groups. The negative scale had good internal consistency for non-caregivers (Cronbach's alpha of .89). However, the internal consistency of the scale when used with caregivers is considered unacceptable (George & Mallery, 2003) with a Cronbach's alpha of .42. Although none of the analyses in the

current study require use of this particular scale, it is important to recognize that caregivers are responding to this item differently.

State-Trait Anger Scale (STAXI). The State-Trait Anger Scale (Spielberger, Jacobs, Russell, & Crane, 1983) measures both current feelings of anger that participants are experiencing and their tendency to experience anger across situations. The measure is based on a 4-point Likert scale (*1 = not at all, 4 = very much so*). Scores are calculated for each subscale, and range from 10 to 40 for each scale. Higher scores reflect greater levels of anger. Both scales (state and trait) have been shown to have good internal consistency (Cronbach's alpha = 0.93 for State Anger, 0.86 for Trait Anger) (Spielberger, 1988).

The State component of the scale demonstrated good internal consistency in the current study with a Cronbach's alpha of .86 for the overall sample; commensurate findings were demonstrated for both caregivers (Cronbach's alpha = .86) and non-caregivers (Cronbach's alpha = .86). Preliminary analyses also revealed that findings on the STAXI State component were skewed, and that there were 4 multivariate outliers, 2 of which were caregivers. No transformation of data was utilized in order to allow for greater interpretability of the findings.

However, internal consistency reliability findings were variable when comparing caregivers to non-caregivers on the Trait component of the measure. The Trait component demonstrated acceptable internal consistency in both the overall sample (Cronbach's alpha = .71) and non-caregiver sample (Cronbach's alpha = .78). More concerning however are the findings demonstrated on the Trait component when completed by caregivers. Specifically, internal consistency was unacceptable (George &

Mallery, 2003) for caregivers (Cronbach's alpha = .35) suggesting a lack of measurement equivalence between the groups (Table 5).

As a result of this finding, additional preliminary analyses were conducted. Item-total correlations also indicate that non-caregivers (Table 6) and caregivers (Table 7) responded to the STAXI Trait differently. It may be that such a small sample of caregivers limited the correlational data for this particular measure.

Additionally, Mahalanobis Distance revealed 7 outliers on the STAXI Trait scale, including 1 caregiver. However, their scores were still within the normal range as defined by the original norms (Spielberger, Jacobs, Russell, & Crane, 1983). Results also revealed the STAXI Trait scale was slightly skewed and kurtotic. Items from this measure were reviewed prior to data analyses in order to assess whether caregivers responded idiosyncratically to any items given their present circumstances. Scores ranged from 10 to 24 for non-caregivers (M = 14.18, SD = 3.21, $CI_{.95}$ 13.50, 14.85) but there was less variability for caregivers' range of scores which ranged from 12 to 22 (M = 14.30, SD = 2.42, $CI_{.95}$ 13.38, 14.22). However, Cohen's effect size value (d = -.04) did not suggest a difference between the two groups. Despite the lack of findings on Cohen's effect size value, results of the main analyses regarding the relationship between forgiveness and trait anger will be interpreted with the above in mind, as caregiver data may influence the overall findings.

Table 5

Psychometric Properties of All Study Variables (N = 118)

Variable	Mean	SD	Possible Range	Skew	SE of Skew	Kurtosis	SE of Kurtosis	Cronbach's Alpha	Caregiver Cronbach's	Non-Caregiver Cronbach's
EFI Total	321.36	36.70	0-360	-1.28	.22	1.01	.44	.97	.96	.98
GDS	5.12	5.45	0-22	1.13	.22	.59	.44	.91	.81	.92
STAXI – State	20.04	4.39	10-40	1.17	.22	1.74	.44	.86	.86	.86
STAXI – Trait	14.21	3.03	10-40	1.15	.22	1.43	.44	.71	.35	.78
CES-D	10.09	7.79	0-60	1.87	.22	5.14	.44	.86	.89	.84
STAI – State	30.90	9.14	10-40	1.17	.22	1.53	.44	.90	.92	.89
STAI – Trait	31.71	8.06	10-40	.93	.22	.97	.44	.87	.87	.88
RCOPE – Positive	11.41	7.64	0-21	-.32	.22	-1.31	.44	.96	.95	.96
Pseudoforgiveness	9.30	3.53	0-20	.19	.22	-1.27	.44	.97	.96	.98
CNV	4.70	3.03	0-10	.12	.22	-1.10	.44	.68	.57	.70

Table 6

STAXI Trait Inter-Item Correlation Matrix for Non-Caregivers (N = 89)

	Corrected Item-Total Correlation	Item 1	Item 2	Item 3	Item 4	Item 5	Item 6	Item 7	Item 8	Item 9	Item 10
Item 1	.53	1									
Item 2	.46	.50	1								
Item 3	.58	.43	.61	1							
Item 4	.61	.32	.40	.29	1						
Item 5	.46	.22	.13	.34	.40	1					
Item 6	.53	.38	.52	.43	.37	.10	1				
Item 7	.33	.37	.04	.27	.19	.35	.26	1			
Item 8	.45	.34	.13	.27	.47	.29	.31	.17	1		
Item 9	.17	.06	.25	.12	.11	-.08	.34	-.12	.25	1	
Item 10	.40	.15	.12	.25	.45	.45	.24	.11	.21	.06	1

Table 7

STAXI Trait Inter-Item Correlation Matrix for Caregivers (N = 29)

	Corrected Item-Total Correlation	Item 1	Item 2	Item 3	Item 4	Item 5	Item 6	Item 7	Item 8	Item 9	Item10
Item 1	.22	1									
Item 2	-.03	.62	1								
Item 3	-.32	.19	.35	1							
Item 4	.32	.27	.34	-.47	1						
Item 5	.18	-.04	-.40	-.23	-.01	1					
Item 6	.08	-.07	-.40	.15	-.30	.33	1				
Item 7	-.07	.10	.17	-.21	.30	-.27	-.32	1			
Item 8	.35	-.18	-.39	-.36	.22	.49	.29	.12	1		
Item 9	-.21	-.50	-.73	.11	-.64	.38	.61	-.30	.37	1	
Item 10	.50	.06	.01	-.41	.51	.38	.17	-.19	.59	-.06	1

Center for Epidemiological Studies Depression Scale (CES-D). The CES-D (Radloff, 1977) is a 20-item self report measure created to assess for the presence of depressive symptomatology in a community sample. Participants are asked to report the frequency of each depressive symptom over the past week on a 4-point Likert scale (*0 = rarely or none of the time, 3 = most or all of the time*). Scores range from 0 to 60, with higher scores indicating more significant levels of depression. The CES-D has been used frequently within both the caregiving literature (Lawton, Brody, & Saperstein, 1989; Zarit, Stephens, Townsend, & Greene, 1998) and community samples (Bassuk, Berkman, & Wypij, 1998; Hybels, Blazer, & Pieper, 2001). The measure has good internal reliability with family caregiving samples (Cronbach's alpha = .91) (Stetz & Brown, 2004). This measure has also demonstrated good test-retest reliability ($r > .54$ at 6 months) in both young and older adult samples (Lewinsohn, Seeley, Roberts, & Allen, 1997). This scale demonstrated good internal consistency in the current study (Cronbach's alpha of .86) for the overall sample and in both groups (caregiver Cronbach's alpha = .89; non-caregiver Cronbach's alpha = .84). Additionally, scores on CES-D were skewed and extremely kurtotic (Table 5). Calculation of Mahalonobis Distance revealed 4 multivariate outliers. Data was not transformed in order to allow for greater interpretability of the results.

State-Trait Anxiety Inventory – Form Y (STAI). The STAI (Spielberger, Gorsuch, Lushene, Vagg, & Jacobs, 1983) is composed of two self report scales, which measure how participants feel in the present moment and how they generally feel. Specifically, the measure includes 20 state-anxiety items and 20 trait-anxiety items, and each subscale is analyzed separately. The measure is based on a 4-point Likert scale and

scores range from 20 to 80 with higher scores reflecting more significant levels of anxiety. The measure has good internal reliability (Cronbach's median alpha = .90 for trait and .93 for state) with a young adult, female group (Spielberger et al., 1983). The trait portion of the measure has demonstrated good test-retest reliability, ranging from .73 to .86 for scores on the trait scale; poorer test-retest reliability was demonstrated on the state portion of the scale, ranging from .16 to .62 on the state scale (Spielberger et al., 1983). The State portion of the measure demonstrated excellent internal consistency in the current study for the overall sample with a Cronbach's alpha of .90. Internal consistency findings on the State portion were relatively commensurate for caregivers (Cronbach's alpha = .92) and non-caregivers (Cronbach's alpha = .89). Additionally, the Trait portion of the measure demonstrated good internal consistency (Cronbach's alpha of .87) for the overall sample, as well as both groups (caregivers Cronbach's alpha = .87; non-caregivers Cronbach's alpha = .88).

Preliminary analyses were conducted to assess for multivariate outliers and normality. Mahalanobis Distance calculations revealed that on the STAI there were 5 outliers on the State component and 6 on the Trait component. Results also revealed that the STAI State component was slightly skewed and kurtotic, though the STAI Trait component was normally distributed (Table 5).

Report of transgression. Participants were asked to provide a brief, written description of a previous offense enacted by their spouses that resulted in feelings of hurt. They were provided with detailed instructions regarding information that might be important to include (Appendix A). Participants then responded to two structured questions which assess the degree of hurt at the time of the injury (*1* = no hurt, *5* = great

hurt) and the time since the injury (*1* = days, *4* = years); these two items have frequently been used before having respondents complete the Enright Forgiveness Inventory (Enright & Rique, 2004).

Narrative Coding System. The written narrative that was provided was coded with techniques similar to those used by McLean and Fournier (2007), with the intent to explore the objective characteristics of transgressions as reported by participants prior to their responding to the EFI. A set of 10 randomly-selected interviews was used to develop a thorough coding system (Appendix B) that sought to qualitatively assess experiences of past transgressions in the marital relationship. Each narrative was coded by a team of two independent raters, both undergraduates in the Department of Psychology at the University of Missouri – St. Louis. The independent raters were trained by the principal investigator in applying the coding system once it was fully established and were blind to the study hypotheses. Prior to coding the research data, each rater demonstrated at least 80% inter-rater reliability based on the initial 10 narratives used to create the coding manual; these 10 initial narratives were not included in the final data analysis. Coders scored each interview protocol privately; these ratings were then reviewed by the primary investigator to assess inter-rater reliability. Of the 118 participants, a total of 87 provided a narrative. Thus, after excluding the 10 used to establish the coding system, 77 narratives were coded and included in the following analyses.

Inter-rater agreement. Based upon simple percentage agreement, the overall, inter-rater agreement (83%) was at the generally accepted cut-off of 80% on the narrative-related variables used in the analyses. Given that this coding system is at the

beginning stages of its development, additional analyses were conducted on the individual items to assess if any items were more difficult for raters to agree upon than others. Further analyses revealed that three variables had lower levels of inter-rater agreement, all of which fell below the generally accepted cut-off. Specifically, item 7, which focused on the experience of emotions after the transgression (see Appendix B), had an inter-rater agreement of 62%. Item 9 asked whether the transgression was something that happened repeatedly or was a one-time occurrence; this particular item was not something respondents were asked to answer explicitly but something that appeared self-evident based on the primary investigator's initial review of the responses provided and had an inter-rater agreement of 69%. Item 10 assessed whether the situation had been resolved and had an inter-rater agreement of 73%.

When the two primary raters were found to be in disagreement, a neutral third party was consulted; this was done for all responses for items 7, 9, and 10 (Appendix B) and all other individual items where there was discrepancy. The third rater was a graduate student, who was blind to the study hypotheses and the ratings made by the other coders.

Enright Forgiveness Inventory (EFI). The EFI (Subkoviak et al., 1995) is a self report measure created to globally assess forgiveness. The measure consists of 60 items that assess positive and negative affect, cognition, and behavior and is based on a 6-point Likert scale. Scores range from 60 to 360, with higher scores reflecting greater forgiveness being offered to the transgressor. The measure also includes a 5-item pseudo-forgiveness scale intended to assess the genuine nature of a participant's forgiveness and to ensure that the participant is not condoning the offense; scores of 20 or more suggest that the participant may be excusing the hurt and scores should be interpreted with

caution. The overall measure demonstrated excellent internal consistency (Cronbach's alpha = .98) in an initial study including college students and their same-sex parents (Subkoviak et al., 1995), and again with older adults (Cronbach's alpha = .97; Hebl & Enright, 1993). The measure also demonstrated good test-retest reliability (r > .86 at 2 weeks) in a young adult sample (Enright & Fitzgibbons, 2000). This measure demonstrated excellent internal consistency in the current study (Cronbach's alpha of .97) for the overall sample, with commensurate findings for both groups (caregiver's Cronbach's alpha = .97, non-caregiver's Cronbach's alpha = .98).

When considering the overall sample results on the EFI and its primary components (e.g., affect, behavior, and cognition), all 4 primary variables had skew or kurtosis levels greater than 1.00: EFI total affect, EFI total behavior, EFI total cognition, and EFI total score. The psychometric properties of the measure in the current study are largely consistent with other research (Subkoviak et al., 1995), and the total scores on the EFI were close to normally distributed despite the greater skew and kurtosis evidenced on the subcomponents of the measure (see Table 8). Mahalanobis Distance was calculated for each variable and revealed 5 significant multivariate outliers on EFI subcomponents of affect and behavior, and 6 significant multivariate outliers on cognition and total EFI scores, two of whom were caregivers. However, these multivariate outliers still fell within the normal distribution of scores typically reported on the measure. These variables were not transformed in order to ensure interpretability of data analyses regarding the unique experiences of caregivers as compared to non-caregivers.

Table 8

Psychometric Properties of EFI for Overall Sample (N = 118)

Variable	Mean	Standard Deviation	Possible Range	95% CI Lower	95% CI Upper	Skew	SE of Skew	Kurtosis	SE of Kurtosis	Cronbach's Alpha
Forgiveness (EFI)	321.36	36.70	0-360	314.67	328.05	-1.28	.22	1.01	.44	.97
EFI Affect	103.48	16.74	0-120	100.43	106.53	-1.22	.22	.69	.44	.96
EFI Behavior	106.58	12.37	0-120	104.32	108.84	-1.32	.22	1.83	.44	.89
EFI Cognition	111.30	12.60	0-120	109.00	113.59	-2.51	.22	6.65	.44	.95

Items on the Pseudoforgiveness scale were also assessed for normality. Results revealed that the variable was kurtotic but not skewed. No multivariate outliers were identified.

1-Item forgiveness question. The EFI concludes with a one item question (Subkoviak et al., 1995), assessing the extent to which the participant has forgiven the offender. Creators of the measure suggest that this item can be used at any time within a study, and that it is most appropriate to have participants respond to this item after all other measures have been completed (Enright & Rique, 2004). This recommendation is based on the fact that this item includes the word forgiveness. The question is based on a 5-point Likert scale (*0 = not at all, 5 = complete forgiveness*).

Global Distress Scale (GDS). The GDS (Snyder, 1997) is a 22-item true-false scale intended to measure participant's overall dissatisfaction within a marital relationship and is part of the Marital Satisfaction Inventory, Revised (MSI-R). Items are categorized into three factors: pessimism regarding the future of the relationship, general relationship dissatisfaction, and unfavorable comparison to other relationships. Scores range from 0 to 22 and higher scores on the scale reflect greater general discontent. The measure has good internal reliability (Cronbach's alpha = 0.93) in individuals in marital therapy and individuals in the general population (Snyder, 1997). The measure also demonstrated good test-retest reliability ($r > .74$ at 6 weeks) in a sample of adults from the general population (Snyder, 1997). The measure demonstrated excellent internal consistency reliability in the overall sample (Cronbach's alpha = .91), with relatively commensurate findings for both caregivers (Cronbach's alpha = .81) and non-caregivers (Cronbach's alpha = .92).

In the current study, scores on the Global Distress Scale were slightly skewed (Table 5) and Mahalonobis Distance calculations revealed 6 multivariate outliers. Participants' overall scores on the GDS were not transformed in order to allow for greater interpretability of the study's findings. Furthermore, findings regarding this measure are consistent with the normative sample, falling within the proposed average range when raw scores are converted to T-scores (Snyder, 1997).

Items from the GDS were reviewed prior to data analyses in order to assess whether caregivers responded idiosyncratically to any items given their present circumstances and outlook on the future. Scores ranged from 0 to 21 for both caregivers and non-caregivers. Despite this, the overall mean response on the measure was relatively higher for caregivers (M = 8.41, SD = 4.79, $CI_{.95}$ 6.59, 10.23) compared to non-caregivers (M = 4.05, SD = 5.24, $CI_{.95}$ 2.94, 5.15). Further, Cohen's effect size value (d = .87) suggested a large significant difference between the two groups, with caregivers reporting more marital distress than non-caregivers.

Additionally, in looking at individual items, there was concern that content of some items from this measure, particularly regarding pessimism for the future of the relationship and general dissatisfaction, may be influenced by the caregiving role and/or the care-recipient's health status (e.g., "Even when I'm with my husband, I feel lonely much of the time," or "I have never felt better in our relationship than I do now."). Subsequently, the factor analytic structure was examined using principal component factoring, with varimax (orthogonal) rotation of the 22 questions using the overall sample. The goal of this was to assess whether items pertaining to the future of the relationship were accounted for by a single factor with the intention that those items

would then be excluded from the current analyses so that caregivers' responses to this measure would not be confounded by the care recipient's health status or alterations in the relationship secondary to the disease process.

The analysis findings support that the Global Distress Scale is unidimensional in structure, with a first factor accounting for 38.03% of total variance in the overall sample (Table 9). Though an additional 4 factors (Table 10), each slightly above 1, were extracted by the factor analysis, visual inspection of the scree plot (Figure 1) suggests that there is only one distinct factor. Furthermore, none of the factors based on the current analyses accounted for all items reflecting pessimism for the future shared with one's spouse. Therefore, all items of the measure were included in later analyses, keeping in mind that caregivers mean report of marital distress tended to be higher.

Table 9

Eigenvalues of the Global Distress Scale

Component	Total	% Variance
1	8.37	38.03
2	1.67	7.57
3	1.54	7.01
4	1.27	5.62
5	1.20	5.47

Table 10

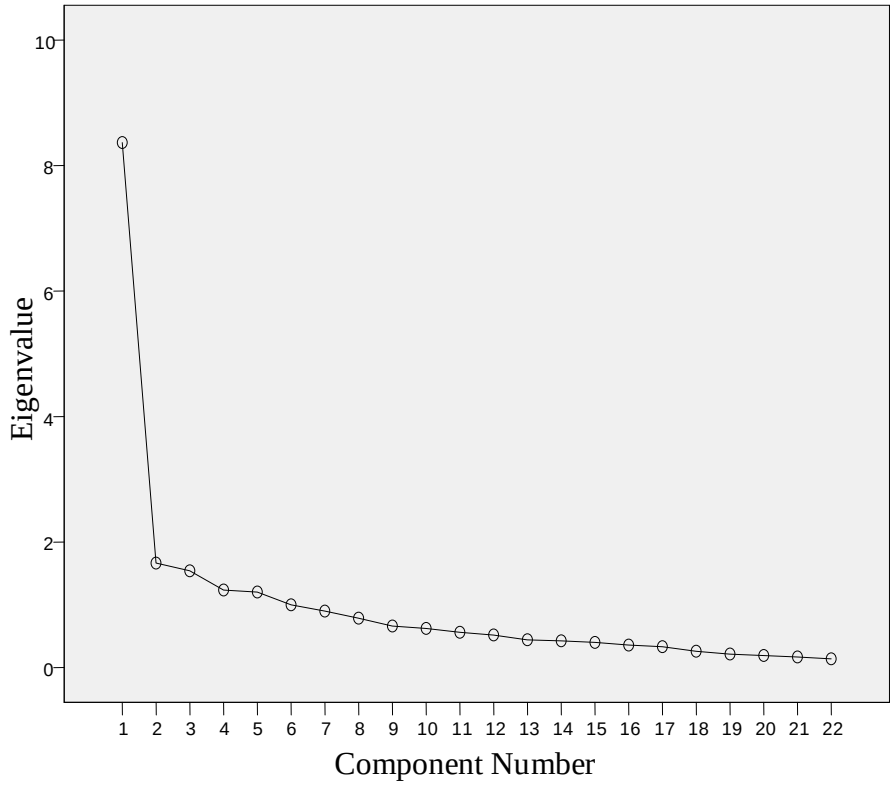
Principal Component Results of the Global Distress Scale

	Component				
	1	2	3	4	5
Item 1					.815
Item 2			.613		.382
Item 3	.684		.364		
Item 4	.782				.415
Item 5			.382	.511	
Item 6	.363	.480			.406
Item 7	.360		.368	.424	
Item 8	.320		.673		
Item 9				.740	
Item 10			.503	.411	
Item 11		.479	-.432	.471	
Item 12		.792			
Item 13	.433	.456			
Item 14		.720			.334
Item 15			.685		
Item 16	.365		.405	.592	
Item 17		.687			
Item 18	.672		.453		
Item 19				.748	
Item 20		.356			.687
Item 21		.386		.462	
Item 22	.827				

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

Figure1

Scree Plot of the Principal Component Results of GDS



Conventionalization Scale (CNV). The CNV (Snyder, 1997) is a validity scale incorporated into the Marital Satisfaction Inventory, Revised (MSI-R), and is an abbreviated version of a 34-item conventionalization scale developed by Edmonds in 1967. The 10-item true-false scale is intended to assess participants' tendencies to distort the appraisal of their marital relationship in a socially desirable fashion, and reflects individuals' attempt to describe the relationship in unrealistically positive terms. Scores range from 0 to 10, with low scores reflecting a "possible failure to attend to positive

features of the relationship and heightened reactivity to negative qualities or events" and high scores reflecting greater distortion or an effort to report in a socially desirable fashion (Snyder, 1997, p. 20). The scale has been examined several times in relation to measures of social desirability and marital adjustment and has demonstrated good internal reliability (Cronbach's alpha = 0.83) in a sample of individuals involved in marital therapy (Snyder, 1997). The measure demonstrated acceptable internal consistency reliability in the overall sample (Cronbach's alpha = .68). However, internal consistency reliability demonstrated for caregivers was poor (Cronbach's alpha = .57) compared to non-caregivers which was acceptable (Cronbach's alpha = .70) suggesting a lack of measurement equivalence.

The distribution for the CNV was examined for normality and preliminary analyses revealed that the CNV was slightly kurtotic though not skewed (Table 5). Items from the measure were also reviewed given the lack of measurement equivalency for caregivers and non-caregivers prior to data analyses in order to assess whether caregivers responses were influenced by the caregiving relationship (e.g., is the perception of the relationship as it is in its present state influenced by the caregiving relationship). Further evidence of a discrepancy in response to this scale was seen in the groups' scores. Caregivers' scores ranged from 0 to 9 (M = 3.97, SD = 2.57, $CI_{.95}$ 2.99, 4.94). In comparison, non-caregivers scores ranged from 0 to 10 (M = 4.93, SD = 3.14, $CI_{.95}$ 4.27, 5.59), suggesting that caregivers reported greater conflict within the relationship. Further, Cohen's effect size value (d = -.34) suggested a small to medium difference between the two groups responses to this scale.

Measure of Cognitive Impairment. The spousal caregiver's report of the cognitive status of care recipients was assessed using a measure of cognitive impairment created by the authors of the Stress Process Model (Aneshensel, Pearlin, Mullan, Zarit, & Whitlatch, 1995) that consists of seven items. Items are based on a six-point Likert scale (from "not at all difficult" to "can't do at all") and assess the caregiver's report of the care recipient's ability to remember relevant information (i.e., recent events, day of the week, home address, words, simple instructions, home layout, and speaking sentences). The possible range of scores is 0 to 35 and higher scores on this measure are indicative of more severe cognitive impairment. The measure has good internal reliability (Cronbach's alpha = .86). It has also shown adequate convergent validity when compared to the MMSE (*r*=.65) (Aneshensel, et al., 1995). In the current study, scores ranged from 0 to 25 (M = 10.92, SD = 6.52) and the measure demonstrated good internal consistency (Cronbach's alpha of .87).

Assessment of Caregiver Worry/Strain. The subjective experience of caregiver worry/strain was assessed using an 8-item measure (Zarit et al., 1998). Items assess the degree that caregivers experience lasting physical and psychological tension that are the byproduct of caregiving duties (e.g., "I feel more and more tense as the day goes on," "The physical strain on me is more than I can take"). Items are based on a four-point Likert scale ranging from "never" to "all the time" (Gaugler et al., 2003). Higher scores are indicative of higher levels of worry/strain. Adequate internal reliability has been demonstrated for this measure (Cronbach's alpha = .79) (Gaugler et al., 2003). In the current study, scores ranged from 8 to 28 (M = 16.95, SD = 5.10) and the measure demonstrated good internal consistency (Cronbach's alpha = .86).

Procedure

All individuals who were recruited by telephone or the St. Louis Alzheimer's Association and who expressed interest in the study were contacted by the researcher in order to more thoroughly describe the nature and purpose of the study, and discuss compensation for participation. Participants were also informed that they would receive a packet in the mail containing all necessary documents for the purposes of the study. For participants recruited through the St. Louis Alzheimer's Association, the researcher emphasized the fact that further receipt of services was not contingent upon enrollment in the study.

Study packets were then mailed to all interested participants, which contained consent forms, measures to be completed, and a self-addressed, stamped envelope. The researcher then called one week after the packet had been mailed to confirm that it had been received and to discuss any questions or concerns that participants had regarding consent. Participants were asked to return the completed surveys with a signed consent form.

For participants who completed the survey online, they received the same information on an introductory page to the website. The site introduced them to the purposes of the study and had contact information for the researcher so that if they had any questions regarding consent or the questions posed, they would have equal opportunity to speak to the investigator. Five individuals completing the online format contacted the researcher to: inquire about consent (n = 1), inquire about confidentiality (n = 2), and to inquire about how to navigate the website (n = 2). All participants completing the online format were required to provide their full name, confirming that

they had read and understood the consent form provided; they could not proceed in completing the survey without providing their online signature.

Each participant, regardless of how they completed the survey, was assigned a participant number in order to protect her confidentiality. Data files do not contain participant identifying information. A key linking participant names and identification numbers was kept separate from the confidential files.

Participants were first asked to provide demographic information. Other measures were then ordered so that participants were asked to complete the Brief RCOPE, STAXI, CES-D, and STAI in sequence. Participants were then asked to complete the GDS, CNV, write a narrative regarding a past transgression enacted by a spouse which created feelings of hurt (Appendix A), and finally respond to the EFI. Half of the participants who completed a hard copy of the survey completed these latter items in a counterbalanced fashion. Lastly, all participants were asked to respond to the 1-item Forgiveness Question. For those participants in the caregiver group, they were also asked to respond to a measure of cognitive status regarding the care recipient, as well as their current level of caregiver worry and strain.

Though the proposed study called for a counterbalanced order of the measures as outlined above for all participants, this could only be done with participants who completed the hard copy survey due to limitations in the online format. The counterbalanced order was assessed among those who completed the hard copy survey ($n = 30$), and results did not reveal significant differences between the groups on the GDS, $t(28) = .04$, $p > .05$, the CNV, $t(28) = -.80$, $p > .05$, or the EFI, $t(28) = .94$, $p > .05$, based on the order of responses.

Upon receipt of the completed survey, participants were enrolled in one of three raffles for $100 each. For those surveys completed by mail, the primary investigator separated their responses from their consent information, placing the completed assessment within the participant's confidential file in a locked file cabinet. For those surveys completed online, responses were printed and then the same procedure was followed in order to ensure confidentiality and security of information. Data from all questionnaires were inputted into an SPSS data file and data were then cleaned to ensure accuracy.

Results

Power Analyses

Group comparison. In order to achieve 0.80 power for the comparison of female caregivers and female spouses' global scores of forgiveness, setting alpha at .05 with a medium effect size (d = .50), this portion of the study required a minimum of 64 participants in each group (Cohen, 1992). Thus, this study is considered underpowered for testing mean differences in scores; 95% confidence intervals were examined instead to determine if forgiveness scores represent responses within the same population.

Hypotheses 1-4. As stated previously, to assess Hypotheses 1-4, both samples were pooled to explore the relationships between forgiveness and its many proposed correlates. Subsequently, in order to achieve 0.80 power for hypotheses 1-4, setting alpha at .05 with a medium effect size (r =.30), this portion of the study required a minimum sample of 85 (Cohen, 1992). Thus, the power was sufficient for the remaining proposed analyses.

Summary of power analyses. Of the planned data analyses, the largest sample size necessary to achieve 80% power was a sample of 128 to conduct the group comparison independent t-test. The current sample size of 118 is sufficiently large to test Hypotheses 1-4 at this level; however, this sample size is lower than the estimated sample necessary to achieve an 80% likelihood of correctly identifying meaningful differences for the group comparison of responses on the Enright Forgiveness Inventory. Additionally, the two groups are significantly different in terms of size, with non-caregivers comprising 75.42% of the sample. Although the proposed analyses originally called for an independent t-test for the group comparison, the analyses were modified to accommodate the discrepancy in the two groups' sample sizes; subsequently, the decision was made to assess and compare the psychometric properties of the EFI when applied to caregivers and non-caregivers, and Cohen's d was utilized to assess for any significant differences between the groups' total scores.

Missing Data

A prorated sum was created for each measure such that the participant's composite score was equal to her average response multiplied by the number of items on the measure. In doing so, the sum for those without missing data was not altered, and for those with missing items it allowed for an estimation of the composite score based on the participant's responses. In instances in which a participant did not provide data for 15% or more of the items on a particular measure, the group mean was inserted for her composite score. Using the group mean approach limits the variability of scores for a particular measure; however, it is conservative and does not alter the group mean for each

measure (Tabachnick & Fidell, 2007). Mean insertion based upon missing item-level data was infrequent and occurred in less than 3% of cases.

Main Analyses

Group Comparison Analyses. In order to compare a group of female family caregivers to non-caregiving female spouses, the current study originally proposed an independent sample t-test be conducted comparing the two group means on the EFI total score and subscale scores. In order to assess whether caregiving and non-caregiving participants responded similarly to items on the Enright Forgiveness Inventory (EFI), the psychometric properties of the participants' responses were assessed.

As previously reported (Table 8), the overall sample's score on the total EFI ranged from 216 to 360 (M = 321.36, SD = 36.70). The psychometric properties of the EFI for caregivers (Table 11) and non-caregivers (Table 12) are generally commensurate with the overall findings. However, caregivers' total scores on the EFI ranged from 223 to 357 (M = 307.69, SD = 36.99, $CI_{.95}$ 293.61, 321.76) and were significantly lower than non-caregivers whose total scores on the EFI ranged from 216 to 360 (M = 325.81, SD = 35.69, $CI_{.95}$ 318.29, 333.33), $t(116) = 2.35$, $p < .05$. In looking at the 2 groups, the 95% Confidence Intervals overlap for the total scores on the EFI as well as the affective and behavioral subscales. However, there is a distinct difference and lack of overlap on the 95% Confidence Interval for the EFI cognition subscale, with caregivers reporting fewer positive thoughts toward their husband than non-caregivers.

Furthermore, Cohen's effect size value (d = -.24) suggests a small difference between the total score for the two groups, with non-caregivers reporting greater levels of forgiveness. Given the discrepancy in sample sizes, the decision to conduct a post hoc

power analysis was made to aid in the interpretation of the value of this finding. The post hoc power analysis for this test of differences on the EFI revealed low statistical power (.20).

Given the findings on the EFI with a small group difference (d = -.24) between caregivers and non-caregivers, further analyses were conducted to assess the relationship between caregiver burden and strain, the care recipient's cognitive status as reported by the wife, and the EFI total score. Findings revealed a significant, linear relationship between forgiveness and the cognitive status of the care recipient, $r(29) = .42$, $p < .05$, suggesting greater levels of forgiveness by wives when husbands were more cognitively impaired. However, Pearson correlations did not reveal a significant relationship between current levels of caregiver burden/strain and forgiveness (Table 13).

Hypothesis 1 Analyses. Hypothesis 1 postulated that higher feelings of mutuality within the relationship would be positively associated with higher levels of forgiveness amongst the overall sample. Pearson correlation (Table 14) was conducted to assess the strength and direction of the linear relationship between levels of forgiveness and marital satisfaction. This was conducted looking at two groups (caregivers and non-caregiving wives) pooled together. Results indicate higher rates of marital distress are negatively correlated with levels of forgiveness $r(116) = -.69$, $p < .01$.

Table 11

Psychometric Properties of EFI for Caregiver Sample (n = 29)

Variable	Mean	Standard Deviation	Possible Range	95% CI Lower	95% CI Upper	Skew	SE of Skew	Kurtosis	SE of Kurtosis	Cronbach's Alpha
Forgiveness (EFI)	307.69	36.99	0-360	293.61	321.76	-.85	.43	-.18	.85	.96
EFI Affect	98.87	17.41	0-120	92.25	105.50	-.85	.43	-.65	.85	.95
EFI Behavior	103.49	12.39	0-120	98.78	108.21	-1.37	.43	2.42	.85	.90
EFI Cognition	105.32	14.64	0-120	99.75	110.88	-2.02	.43	4.38	.85	.95

Table 12

Psychometric Properties of EFI for Non-Caregiver Sample (n = 89)

Variable	Mean	Standard Deviation	Possible Range	95% CI Lower	95% CI Upper	Skew	SE of Skew	Kurtosis	SE of Kurtosis	Cronbach's Alpha
Forgiveness (EFI)	325.81	35.69	0-360	318.29	333.33	-1.53	.26	1.98	.51	.98
EFI Affect	104.98	16.34	0-120	101.54	108.43	-1.40	.26	1.49	.51	.96
EFI Behavior	107.59	12.27	0-120	105.00	110.17	-1.38	.26	1.96	.51	.89
EFI Cognition	113.24	11.28	0-120	110.87	115.62	-2.95	.26	9.32	.51	.95

Table 13

Correlation Matrix of Variables for Caregiver Factors and Forgiveness (n = 29)

	EFI Total	Cognition	Strain
EFI Total	1		
Care Recipient Cognition	.42*	1	
Caregiver Strain	-.22	.34	1

*****Correlation is significant at the 0.05 level (2-tailed).

Table 14

Correlation Matrix of Variables for Hypotheses 1-3 (N = 118)

	EFI	GDS	STAXI State	STAXI Trait	CES-D	STAI State	STAI Trait	RCOPE Positive
EFI	1							
GDS	-.69**	1						
STAXI – State	-.26**	.37**	1					
STAXI – Trait	-.05	.07	.39**	1				
CES-D	-.37**	.48**	.50**	.26**	1			
STAI – State	-.49**	.50**	.41**	.28**	.60**	1		
STAI – Trait	-.35**	.33**	.27**	.24**	.40**	.68**	1	
RCOPE – Positive	.06	-.07	.01	.12	.06	.03	.00	1

**Correlation is significant at the 0.01 level (2-tailed).

Hypothesis 2 Analyses. Hypothesis 2 proposed that higher frequencies of forgiveness would be negatively associated with anger, depression, and anxiety for the overall sample. Results of Pearson correlation (Table 14) revealed a negative relationship between forgiveness and state levels of anger, $r(116) = -.26$, $p < .01$, depression, $r(116) = -.37$, $p < .01$, state anxiety, $r(116) = -.49$, $p < .01$, and trait anxiety, $r(116) = -.35$, $p < .01$. Though trait anger and forgiveness were not correlated based on these findings, it is important to recognize that these findings may be influenced by the lack of measurement equivalency between caregivers and non-caregivers as reflected in the discrepant levels of internal consistency reliability on the STAXI (Trait component).

Hypothesis 3 Analyses. Hypothesis 3 postulated that higher frequencies of positive religious coping would be positively associated with higher levels of forgiveness. Results of Pearson correlation (Table 14) did not reveal a significant, linear relationship between forgiveness and positive religious coping, $r(116) = .06$, $p = .52$.

Hypothesis 4 Analyses. Hypothesis 4 proposed that higher rates of pseudoforgiveness would be positively associated with higher levels of social desirability, as expressed in the conventionalism scale (Snyder, 1997). Results of Pearson correlation revealed a significant, positive relationship between pseudoforgiveness and social desirability, $r(116) = .32$, $p = .01$.

Secondary Analyses

Forgiveness As Related to Severity & Time. Secondary analyses were conducted to assess the relationship between total forgiveness scores on the EFI, the perceived level of forgiveness based on the 1-item forgiveness question, the perceived severity of the transgression as reported by the respondents, and the time since the

reported transgression. Analyses were conducted using the responses of the overall sample. Results of Pearson correlation did not reveal a significant, linear relationship between the reported level of forgiveness and the severity of the hurt, $r(116) = .06$, $p = .55$, nor did results reveal a significant relationship between total forgiveness and the time since the reported transgression, $r(116) = .01$, $p = .92$. However, results of Pearson correlation revealed a significant, positive relationship between ratings of forgiveness on the EFI and self-report ratings of the perceived level of completed forgiveness granted toward one's transgressor.

Table 15

Correlation Matrix of Forgiveness, Severity, & Time (N = 118)

	EFI Overall	Perceived Forgiveness	Severity of Hurt	Time Since Offense
EFI Overall Score	1			
Perceived Forgiveness	.46**	1		
Severity of Hurt	-.19	-.06	1	
Time Since Offense	.01	-.14	-.01	1

** Correlation is significant at the 0.01 level (2-tailed).

Forgiveness & Its Correlates Among Subgroups. Given the unique findings on the EFI when comparing caregivers to non-caregivers, secondary analyses were conducted to assess the nature of the relationship between forgiveness and its correlates for each group. Therefore, Pearson correlations were used to assess the relationship between forgiveness and mutuality, anger, depression, anxiety, and positive religious coping for both caregivers (Table 16) and non-caregivers (Table 17). Correlation coefficients were then compared by caregiver status using Fisher's R to Z transformation, with the recognition that this is sensitive to sample size.

Pearson correlations revealed that among caregivers there is a significant, negative, linear relationship between forgiveness and marital distress, $r(27) = -.73$, $p = .01$, and forgiveness and state anxiety, $r(27) = -.40$, $p = .01$. There were no other significant relationships between forgiveness and the other proposed correlates.

In comparison, Pearson correlations revealed multiple significant relationships between forgiveness and its proposed correlates amongst a non-caregiving group. Forgiveness and marital distress, state anger, depression, state and trait anxiety were all found to have negative linear relationships (Table 17), with higher rates of forgiveness resulting in reduced psychological symptoms and relationship distress. Results of Fisher's Z transformation did not reveal any significant differences between the correlational values of caregivers (Table 16) and non-caregivers (Table 17).

In the same fashion, the relationship between pseudoforgiveness and social desirability, as measured on the CNV, was assessed looking at caregivers and non-caregivers separately. For caregivers, Pearson correlations revealed no relationship between pseudoforgiveness and social desirability. In comparison, there was a positive relationship between pseudoforgiveness and social desirability amongst non-caregivers, $r(87) = .32$, $p = .01$. Results of Fisher's Z transformation did not reveal any significant differences between the correlational values of caregivers and non-caregivers.

Table 16

Correlation Matrix of Primary Variables for Caregivers (n = 29)

	EFI	GDS	STAXI State	STAXI Trait	CES-D	STAI State	STAI Trait	RCOPE Positive
EFI	1							
GDS	-.73**	1						
STAXI State	-.17	.54**	1					
STAXI Trait	-.17	.29	.26	1				
CES-D	-.13	.46*	.80**	.43*	1			
STAI State	-.40*	.61**	.57**	.67**	.76**	1		
STAI Trait	-.31	.54**	.44*	.64**	.57**	.79**	1	
RCOPE Positive	-.02	-.23	-.27	-.16	-.15	-.21	-.19	1

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Table 17

Correlation Matrix of Primary Variables for Non-Caregivers (n = 89)

	EFI	GDS	STAXI State	STAXI Trait	CES-D	STAI State	STAI Trait	RCOPE Positive
EFI	1							
GDS	-.66**	1						
STAXI State	-.30**	.33**	1					
STAXI Trait	-.02	.02	.44**	1				
CES-D	-.43**	.45**	.36**	.22*	1			
STAI State	-.50**	.43**	.37**	.17	.50**	1		
STAI Trait	-.39**	.32**	.21*	.15	.35**	.68**	1	
RCOPE Positive	.12	-.08	.11	.18	.11	.09	.06	1

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Narrative Coding Content Analyses

Results of the coding procedures were used to conduct analyses on the content of participants' narrative responses. Many narratives were extremely brief (e.g., some respondents simply wrote "DUI"), and subsequently the majority did not disclose the details of what they were doing before (85.70%), during (77.90%), or after (81.80%) the event. They also generally did not report where they were at the time of the event or the physical sensations experienced (Table 18). Of those who reported how they felt during the transgression, they reported hurt (15.6%), anger (13.0%), and other emotions (14.3%) which most often included "embarrassment" (Table 18). Additionally, the frequency of the particular hurt varied, in that 42.9% reported singular events while 28.6% reported hurts that happened repeatedly during their marriage. Participants tended not to disclose whether the situation had been resolved (76.6%), and whether their husbands had apologized (93.5%).

Table 18

Narrative Response Content Analysis (N = 77)

	%
Where did transgression take place	
Home	10.40
In public	9.10
Other	10.40
Not disclosed	70.10
Other people present	
Just respondent/husband	1.30
Friends	3.90
Other family	14.30
Strangers	1.30
Other	0.00
Not disclosed	79.20

Table 18 (continued)

Before the offense	
Engaging in a task	11.70
Ignoring her husband	1.30
Other	1.30
Not disclosed	85.7
During the offense	
Ignoring her husband	6.50
Behaviorally reacting	13.00
Other	2.60
Not disclosed	77.90
During the offense	
Ignoring her husband	9.10
Behaviorally reacting	6.50
Other	2.60
Not disclosed	81.80
Physical sensations reported	
Dizziness	1.30
GI difficulties	0.00
Changes in temperature	0.00
Shortness of breath/heart racing	1.30
Trembling/shaking	0.00
Other	1.30
Not disclosed	96.10
Emotions reported	
Anger/frustration/irritability	13.00
Anxious/vulnerable	7.80
Ashamed/guilty	2.60
Depressed/sad/grief	6.50
Hurt	15.60
Jealousy/resentment/mistrust	1.30
Other	14.30
Not disclosed	39.00
Nature of the transgression	
Arguing	18.20
Criticizing	22.10
Engaging in inappropriate behavior	23.40
Extramarital affair	7.80
Ignoring/being unsupportive	28.60
Not helping	0.00
Other	0.00

Table 18 (continued)

Frequency of offense	
One time	42.90
Repeatedly	28.60
Unclear	28.60
Situation resolved	
Resolved	14.30
Unresolved	9.10
Not disclosed	76.60
Apology offered	
Apology	5.20
No apology	1.30
Not disclosed	93.50
Help to overcome the situation	
Conceptualization of past positive	31.00
Counseling	12.30
Faith/religion	16.80
Support of family/friends	14.10
Other	2.60
Not disclosed	23.20

Discussion

This section will include a general summary of the findings, followed by a discussion of the strengths and limitations of the current research. Additionally, an interpretation of research results will be provided, including the implications that the current findings may have in regard to theory and practice.

Summary of Results

Group Comparison Discussion. The first portion of the study was intended to be partially descriptive in nature and subsequently no formal hypotheses were established, as the only predictions made were that caregivers and non-caregivers would respond similarly to the Enright Forgiveness Inventory and that the findings would support the use of the measure with an older female spousal group. Results indicate that the measure demonstrated excellent internal consistency reliability in both groups (caregiver's

Cronbach's alpha = .97, non-caregiver's Cronbach's alpha = .98), with findings commensurate with past studies (Subkoviak et al., 1995) some of which have included older women (Hebl & Enright, 1993).

In considering the overall sample results, all three subscales of the EFI had skew or kurtosis levels greater than 1.00. However, the total scores on the EFI were close to normally distributed and similarly distributed (means and standard deviation) to past research (Subkoviak et al., 1995). These findings are important in terms of understanding the forgiveness construct, the Enright Forgiveness Inventory, and its application to and usefulness amongst older wives. The results of the current study support past research regarding the psychometric properties and reliability of the EFI and also support the utility of this measure of forgiveness amongst an older adult, female population.

Despite the overall samples' psychometric properties, caregivers and non-caregivers appear to be reporting somewhat different forgiveness processes. Caregivers' total scores on the EFI were significantly lower than non-caregivers, $t(116) = 2.35$, $p < .05$. Moreover, Cohen's effect size value ($d = -.24$) supports the above, reflecting a small difference between the two groups. Additionally, there is a distinct difference and lack of overlap on the 95% Confidence Interval for the EFI cognition subscale, with caregivers reporting fewer positive thoughts toward their husband than non-caregivers. Subsequently, these findings are inconsistent with the general prediction that had been made. However, they must be interpreted with caution, as post-hoc power was low, and the caregiver data is limited.

The above findings are important and speak to the fact that forgiveness is a multifaceted process. Though it is unclear why caregivers are responding to the cognitive

subscale of the EFI differently, it reflects that each component of the forgiveness process can occur independently of the other and that it is critical to assess each facet of the process. These findings support the initial description of the EFI which emphasized the need to utilize the measure in its entirety.

Given that much of the literature regarding forgiveness has come from the understanding of stress and unforgiveness, it may be the case that these other constructs are influencing and perhaps even mediating the experience of forgiving or how it is reported on the EFI. Berry and Worthington (2001) suggested that those involved in distressed relationships would experience increased stress and changes to both their physical and mental health; these findings might partially help explain the current study's findings, particularly with regard to how caregivers responded to the EFI and the cognitive subcomponent of the measure. It may be the case that as peoples' stress levels increase, the changes in their own health interfere with current feelings or interpretation of past events and forgiveness levels. Such stress may have been experienced more acutely by caregivers in the current study. The implications of this are significant, because it might suggest that other populations under similar distress, be it related to marital discord, negative changes in health, or other negative life events aside from interpersonal transgression, will respond to the EFI differently.

The findings concerning the EFI must also be considered with the secondary analyses in mind. When looking at the total scores on the EFI in conjunction with the analyses considering care recipients' cognitive functioning, it suggests that the care recipient or more broadly, the offender, may play an important role in the forgiveness process. Specifically, if rates of forgiveness increase as a care recipient's cognition

declines, it would suggest that the caregiver's ability to forgive might be influenced by the demands of the relationship and the need to resolve past issues before the loss of a loved one, or that they perhaps feel sorry for the offender given his condition and cannot maintain negative affect against him. These findings provide early support for the notion that forgiveness is an interpersonal process that is influenced, at least in part, by a dyadic relationship. The potential implications of this particular finding are significant as it would support past interpersonal, theoretical interpretations of the forgiveness construct (Hargrave, 1994; McCullough, 2000) and aid in the interpretation of EFI scores when completed in response to a specific interpersonal transgression. Additionally, the EFI seems particularly useful in its ability to detect forgiveness within a dyadic relationship based on its contents and wording.

Hypothesis 1 Discussion. Hypothesis 1 posited that higher feelings of mutuality within the relationship would be positively correlated with higher levels of forgiveness. Mutuality was assessed using the Global Distress Scale, with item content being described as reflective of "general relationship affect" and mutuality (Snyder, 1997). Data analyses revealed a negative relationship between global distress and forgiveness, $r(116) = -.69$, $p < .01$, supporting Hypothesis 1. Specifically, these findings suggest that less distress within the relationship of middle-aged and older adult married couples is positively related to greater levels of forgiveness as reported on the EFI and are consistent with past research findings (Byock, 2005; McCullough et al., 1997; Rusbult et al., 2005).

Given the fact that the overall mean response on Global Distress Scale was significantly different between caregivers and non-caregivers, it is important to consider

the implications of their different response styles with regard to Hypothesis 1 findings. Though caregivers may not directly report caregiver strain, they may be experiencing distress within their relationship in ways that are not as obviously related to the caregiver role (e.g., item content such as "Even when I'm with my partner, I feel lonely much of the time."), more than non-caregiving wives. Such distress may explain caregivers' reduced rates of forgiveness on the EFI.

Hypothesis 2 Discussion. Hypothesis 2 posited that higher levels of total forgiveness (e.g. affective, cognitive, and behavioral components) would be negatively associated with anger, depression, and anxiety. Results of Pearson correlations generally supported Hypothesis 2, with total forgiveness scores on the EFI being negatively associated with state anger, depression, and state and trait anxiety. These findings are consistent with other research that has demonstrated similar linear relationships (Hebl & Enright, 1993; Thompson et al., 2005) and provide support that forgiveness, when measured as a multifaceted process by the EFI, is related to many psychological benefits for middle-aged and older women reporting on significant transgressions within longstanding marriages. Furthermore, these findings support the use of the EFI when assessing forgiveness and its relationship to the current psychological benefits experienced.

Despite these findings, the EFI total score was not significantly correlated to trait anger, which is inconsistent with past research (Harris et al., 2006; Rye et al., 2001). This particular finding is surprising, but the lack of a relationship between overall scores on the EFI and trait anger may reflect an inability to adequately assess trait features in the current study. Given that participants responded to the EFI in reaction to a specific

transgression, they may not have adequately evaluated and reported their own past reactions and attitudes (including anger and forgiveness) to other lesser offenses. Additionally, these findings may be in part attributed to the discrepancy between caregiver and non-caregiver interpretation of the STAXI Trait scale items, with extremely different Cronbach's alphas. Although Cohen's effect size values do not reflect a difference between the means of caregiver and non-caregiver reports, Cronbach's alpha values suggest that caregivers responded idiosyncratically to this measure as the items did not correlate as well as would be predicted. Though it is difficult to say what might have caused these findings, it is possible that the small sample of caregivers limited the findings.

Hypothesis 3 Discussion. Hypothesis 3 predicted that higher frequencies of positive religious coping would be positively associated with higher levels of forgiveness scores on the EFI. This prediction was not supported by the current study and Pearson correlation analyses, as no significant, linear relationship was found. These findings are surprising and rather contradictory to much of the literature that exists and that suggests a positive relationship between forgiveness and spiritual peace (McCullough et al., 1997). It may be the case that middle-aged and older wives who have been married for a long duration, have established other resources and coping skills that aid in the forgiveness process more so than spiritual coping; for example, wives who are in longstanding marriages may have other sources of social support from extended family, may have learned ways to communicate with their husbands about offenses, or may have found intrapersonal ways of coping with marital distress.

However, in thinking about these findings, they seem somewhat complicated by the measurement of spiritual peace used in the current study. Specifically, the current study utilized the Brief RCOPE, which includes items dedicated to religious forgiving, purification, and focus. Though the measure also contains items regarding spirituality and religious coping, it may be the case that the measure did not assess "spirituality" as it has been defined by other studies, which has been more direct and based on subjective impressions; for example, Toussaint et al. (2001) directly asked participants to rate how spiritual they were on a 10-point scale. Additionally, the Brief RCOPE was established through interviews with people experiencing major life stressors and "facing diverse critical life events" (Pargament et al., 2011, p. 52); in thinking about the establishment of the measurement, it may be the case that it is more appropriately applied to an acute hurt that requires current processing rather than a trauma or offense that is retrospective in nature.

Further concerns arise about the instructions utilized in the introduction of this measure and must be considered in the interpretation of these findings. Specifically, the instructions for this measure in the current study were to report on the application of methods of religious coping in response to negative events but not particular to the offense that wives were later asked to describe. Subsequently, richer findings may have resulted from more detailed instructions for the measure. Moreover, it is unknown whether rearranging the order of the measures to have the report of religious coping and spirituality occurring closer to the report of the transgression may have resulted in different findings.

Hypothesis 4 Discussion. Hypothesis 4 postulated that higher rates of pseudoforgiveness, as measured on the final items of the EFI, would be positively associated with higher levels of social desirability, as expressed in the conventionalism scale (Snyder, 1997). Results of Pearson correlation analysis support this hypothesis, with social desirability scores positively correlating to higher pseudoforgiveness scores. These findings are consistent with past findings that rates of social desirability and forgiveness are positively correlated (Rye et al., 2001). Additionally, these findings may be influenced by the age and sex of participants, as past research has shown that older women have a tendency to provide more socially desirable responses in comparison to both younger individuals and men (Ray & Lovejoy, 2003).

However, it is important to note that while some studies have looked at forgiveness and social desirability, most do not report the relationship between pseudoforgiveness and desirability. Instead, pseudoforgiveness has solely been used to assess the genuine nature of a participant's forgiveness and to ensure she was not condoning the offense. Though the current findings are not surprising, they do raise questions about the interpretation of pseudoforgiveness and the EFI. Specifically, the cutoff score on the pseudoforgiveness, set at 20, does not necessarily discriminate adequately between true forgiveness and a socially desirable response.

Secondary Analyses. Secondary analyses were conducted to assess the relationship between total forgiveness scores on the EFI, self-report ratings of completed forgiveness, severity of the hurt as perceived by the respondent, and time since the hurt. Findings support a relationship between self-report ratings of how much the respondent has forgiven and total scores on the EFI. However, the findings are otherwise somewhat

surprising, and do not support a relationship between total forgiveness, the severity of the offense, and the time that has elapsed since the hurt.

Some have suggested that the severity of a transgression might influence the extent to which an individual forgives their transgressor (McCullough et al., 1998) and as previously noted, many believe that as individuals age they will become more forgiving (Bono & McCullough, 2004; Toussaint, Williams, Musick, and Everson, 2001). Though participants were not asked to complete measures of trait forgiveness, it may be the case that trait forgiveness and other personality features play a more significant role in the forgiveness process, even for a single event, than the features of the offense (e.g., severity and time) do. These findings are important as they help in the conceptualization and defining of forgiveness and may call for further investigation of the personality traits that guide the forgiveness process.

Caregivers versus Non-Caregivers. The findings of secondary analyses are extremely important in the interpretation and understanding of the overall findings, as they provide further evidence of a unique forgiveness experience for caregivers as compared to their non-caregiving peers. In considering the relationship between forgiveness and its previously proposed correlates, caregivers are having a much different experience with fewer psychological benefits. It may be the case that their caregiving role is driving an increase in mood-based symptoms, but such factors cannot be thoroughly explored through more comprehensive analyses with such a small sample size. Additionally, these findings must be considered in the context of some of the main analyses. The decrease in mean on the forgiveness measure, the role of cognition (e.g., positive thoughts toward the offender) in the forgiveness process, and the role of care

recipient's cognitive status all may have influenced the results of these secondary analyses for caregivers.

The findings regarding pseudoforgiveness and social desirability may provide further evidence of distinct processes occurring for caregivers compared to non-caregivers. However, given the small sample size of caregivers, it is difficult to know if the results of correlational data are limited. Additionally, these findings must be interpreted with caution given the fact that preliminary analyses looking at the CNV reflected a small to moderate difference (d = -.34) in sample means between caregivers and non-caregivers, with caregivers reporting in a more forthright and less socially desirable fashion than their non-caregiving peers. It may be the case that other factors influenced caregivers in response to these measures; for example, caregivers may be forthright in their responses because it helps explain the degree of burden they are experiencing and aids in the establishment of services, or it may be the case that they have learned to adapt to more negative experiences and have subsequently more easily identified the factors influencing the experience of marital distress.

Narrative Coding. The narrative coding system that was used in the current study appears to be one of the first of its kind, and was intended to produce a greater understanding of the types of transgressions being considered when older women in longstanding marriages are responding to the Enright Forgiveness Inventory. Subsequently, the instructions utilized for the Report of Transgression and the coding manual were both developed by the Primary Investigator. Analyses suggest that this area of qualitative research is important in understanding forgiveness, but that perhaps a more detailed approach should be taken given that this is in the early phase of development.

In considering the simple percentage inter-rater agreement for the overall coding system, it is within an acceptable range at 83%. However, it is important to recognize the difficulty in assessing certain items, particularly 7, 9, and 10, which required more subjective analyses from the coders regarding respondents' reported experience. These findings reflect the need to further develop the coding manual. Specifically, the manual and coding process may benefit from enhanced instruction and definition of the terminology included so that decisions can be replicated with greater ease.

Additionally, the results are limited by the relatively small sample that actually wrote a narrative and by the fact that many were brief and did not disclose the details of the past transgression. The lack of details may be the result of not enough specificity in the instructional set, the complexities of retrospective reporting and the potential the respondents have forgotten details, a desire not to report certain elements of the event, or perhaps the labor involved in providing a qualitative statement in response to a relatively open-ended question. Though it cannot be determined why individuals are not reporting multiple components that were requested, it is an important consideration in the overall findings.

The lack of a response to the request for the narrative and/or the lack of details provided may have implications in how individuals are responding to the EFI. If individuals are not responding to the EFI with a specific incident in mind, it may limit the interpretability of the findings in that they may be reporting with different "attitudes" in mind other than "forgiveness," which cannot be fully assessed here. Additionally, the lack of response or lack of detail may be indicative of the fact that a forgiveness process has already occurred.

Despite such limitations noted above, the request for a written narrative is important as it has been suggested that ease of forgiveness is related to both the subjective severity ratings of transgressions, and the attributions for the transgression (e.g., partner blameworthiness; Fincham, Jackson, & Beach, 2005). To date, no known research has considered the objective characteristics of the transgression and the relevance of those characteristics in respondents' forgiveness ratings on an objective measure such as the EFI. Subsequently, this is a very important line of research and the current study provides some of the groundwork necessary regarding the objective features of transgressions that older wives are reporting prior to responding to the EFI.

Evaluation of Research Methodology

In order to appropriately interpret the aforementioned findings, it is necessary to first evaluate the methodology of the current research. This section will summarize key study strengths, limitations and possible directions for future research regarding forgiveness and caregivers.

Strengths. The discussion of strengths will begin with aspects of the study design that are relevant to all hypotheses and address problems in the prior forgiveness literature. First, the vast majority of past forgiveness studies have focused on college students, with a more limited body of the research focused on spouses. Very few studies have explored forgiveness amongst older adults, and none have directly explored the construct of forgiveness within a caregiving population. The current study and its hypotheses were framed within one of the predominant models of forgiveness (Enright & the Human Development Group, 1996) and directly explored the utility of the Enright Forgiveness Inventory to middle-aged and older adult wives, including a subsample of dementia

caregivers. The study supports the use of the Enright Forgiveness Inventory in older wives, as it demonstrated sound psychometric properties.

Furthermore, the opportunity to explore responses to the EFI and age is significant, as multiple studies have suggested a relationship between forgiveness and age, which was not supported by the current study. Furthermore, the wives who participated in the current study were generally married for a long duration (M = 32.48, SD = 17.09), allowing for a better sense of how individuals respond to the EFI after years of maintaining an interpersonal relationship with the transgressor as compared to past studies which have not always requested that the transgressor be identified or that have focused on a past transgression by someone with whom the respondent is no longer sharing a relationship (McCullough et al., 1998).

Additionally, the current study utilized measures that were highly similar to or identical to those used in past forgiveness research, thereby allowing replication and extension of findings. Furthermore, this is some of the first forgiveness research to create and utilize a narrative coding system to better understand the qualitative report of past transgressions amongst an older sample of wives married for a long period of time to their transgressors. The use of qualitative data in forgiveness research has received very little attention. The opportunity to examine the qualitative report and its relationship to the more objective report of forgiveness allows for a meaningful contribution to this understudied area.

With regard to the analyses, the group comparison provided the initial evidence that caregivers' experience of forgiveness is unique. Specifically, their response to items reflects significantly fewer positive cognitions toward their husbands for a past

transgression. These findings support the structure of the EFI, as they reflect the multifaceted nature of forgiveness and the need for a single measure that assesses all components of the process. The results regarding the cognitive subscale of the EFI and the secondary analyses conducted support the notion that forgiveness is at least in part a dyadic process and are at the forefront of exploring the role of the transgressor in the forgiveness process. These findings are not only important to the understanding of forgiveness within a caregiver population, but have substantial meaning to the broader forgiveness literature amongst older spouses and other populations with unique experiences.

Limitations & Future Directions. First, with regard to the methodology of the current study, there are substantial limitations that may have implications on the interpretation and generalizability of the results. First, there are significant concerns about the general distribution of scores on most measures completed by the current overall sample, as the distribution of scores on the Global Distress Scale, STAXI (State and Trait), CES-D, and the STAI (State) were all skewed and multiple were also kurtotic. The decision not to transform any of these variables was made to allow for greater interpretability of the results and based on past research regarding the distribution of self-report measures when utilized amongst an older adult sample. Past research has found that advancing age is associated with a decrease in self-reported negative affect (Charles, Reynolds, & Gatz, 2001; Soubelet & Salthouse, in press) and a mild increase in self-report regarding subjective well-being and life satisfaction (Carstensen, Pasupathi, Mayr, & Nesselroade, 2000; Soubelet & Salthouse, in press). Results of past research have been interpreted in multiple different ways, suggesting that the response style of older adults

reflects an increasing desire to present oneself in a positive light that is socially desirable (Soubelet & Salthouse, in press) and the possibility these age-related changes in response reflect an increase in maturity (Roberts & Mroczek, 2008) or better emotion regulation (Carstensen, Fung, & Charles, 2003). Given these findings, the current data provided by older adult women seems largely consistent with other research from this population, though there are certainly concerns about the subsequent generalizability.

Second, with regard to participants, the sample is not culturally diverse. Results are based primarily upon data pertaining to Caucasian wives and husbands. Thus caution must again be exercised when interpreting the generalizability of these findings. Additionally, respondents were generally highly educated and married for a significant length of time, with the average length of marriage being 32.48 years in the overall sample, and with 48.3% reporting that they have been married for over 30 years. This finding seems commensurate with data regarding the general population, as in 2001, 51.9% of those married between the years 1965 and 1969 reported that they had been married for at least 30 years (Kreider, 2005); however, this does not take into account younger generations and their rates of marriage duration. Subsequently, it is unclear how the findings of this study might apply to those who are less educated or in early years of their marriage.

The sample size, although large enough to detect statistically significant relationships via correlation, needs to be larger if we are to make generalizations beyond this one sample and if we wish to effectively compare populations on forgiveness measures. Therefore, a more substantial sample of caregivers is necessary to understand the applications of the Enright Forgiveness Inventory to their unique experience, and

would allow for greater statistical power and further analyses. Recruitment of caregivers proved to be more difficult than anticipated, and perhaps reflects a change in services utilized over time. Specifically, rates of caregivers accessible through support groups tended to be limited, with very few individuals in each, and often with husbands or adult-children utilizing services rather than wives and more caregivers were recruited through online means rather than in-person programs. Additionally, some wives identified that they had discontinued the survey because it was too laborious; it is unknown to what degree recruitment was limited by the relatively long questionnaire individuals had to complete, but it is possible that individuals discontinued because of the level of burden experienced and amount of time lost in the completion process.

Also, there are factors regarding the relationship between the wives and their husbands that were not considered in the current study and that may influence the forgiveness process and participants' response to the EFI. For example, there was no inquiry regarding the frequency of contact; though such a measure would have been subjective in nature, time spent together could influence the nature of the relationship and potential request or demand for forgiveness from the transgressor. Additionally, wives were not asked explicitly whether their spouses communicated with them regarding the transgression or if they offered an apology. Some studies have also explored whether either member of the couple has a history of divorce and the number of marriages for each participant, which was not included in the current study.

Also with regard to methodology, we cannot guarantee that husbands were not present as participants were completing the survey, which is important for two distinct reasons. First, the presence of one's husband may have influenced the report of both a

past transgression and subsequent levels of forgiveness. Additionally, the consent form informed participants that should they report abuse of or by an older adult spouse, it would be reported, following the Missouri guidelines as mandated reporters. Subsequently, it is unknown whether wives reported lesser or minor transgressions that underestimate a history of past harm within the relationship. Second, as related specifically to caregivers, it could be the case that husbands interrupted the survey when requiring care. If interrupted to complete care-related tasks or chores, wives may have responded differently to survey items, particularly those related to frustration or burden.

With regard to the narrative, despite asking participants directly about transgressions and the forgiveness process, we asked for retrospective reports. Subsequently, we must be cautious in interpreting their responses as the possibility exists that wives' retrospective report may actually be altered by the very act of previously having forgiven someone. There are also some concerns about the open ended nature of the narrative prompts. Although participants were specifically instructed to "include such details as where you were, who was there, what you were doing before, during and after the event, what physical sensations you experienced, and what emotions you were feeling during that time," omissions in details may be the result of participants' willingness to only write about certain aspects of the hurt or an inability to remember those details. This again raises the issue of the retrospective nature of the study, and the inability to examine the accuracy of the wives' memory of past transgression.

Future research should keep the above limitations and considerations in mind, and attempt to expand the Enright Forgiveness Inventory to older wives, including a larger sample of caregivers. In expanding to a larger sample of older wives with a greater

subsample of caregivers, it would allow for greater power, more extensive analyses, and subsequently better assessment of variance on the EFI for these unique populations. Future research may also consider applying the EFI to a more diverse sample of older wives and caregivers, as the forgiveness experience is likely to be influenced by the changing health of both members of the relationship and the nature of care being provided, if any.

Conclusions

The current study was created to expand the understanding of the construct of forgiveness and explore its application to middle-aged and older wives, including a subsample of caregivers. Participants were asked to specifically consider a significant transgression that took place during the duration of their marriage, and if they were providing care, they were to select a transgression that occurred prior to taking on the caregiving role. The strengths of this study, thus, are the grounding of a theoretical model of forgiveness to older wives and family caregivers, and the application and extension of the Enright Forgiveness Inventory to these populations. The findings support the utility of the EFI as it demonstrated sound psychometric properties. The study also provides further evidence of a relationship between forgiveness, as measured by the EFI, and other psychological domains amongst older women married for long periods of time.

More specifically, these findings support the application of the EFI to an older female spousal group and reflect the benefit of a multifaceted forgiveness process as it applies to this population. The EFI as utilized in the current study appears to have sound psychometric properties when applied to older adult female spouses in longstanding marriages when they are reporting on interpersonal transgressions that have occurred in

the context of their married lives. The current study also supports the use of the measure in its entirety, recognizing that each component of the forgiveness process (affect, cognition, and behavior) is critical.

Though findings indicated that caregivers reported lower levels of forgiveness than non-caregivers, the EFI demonstrated similar psychometric properties amongst both groups with regard to internal consistency reliability and both groups had overlap on the 95% Confidence Intervals for their total scores. However, findings did not support a relationship between forgiveness, as measured on the EFI, with anger, depression, or trait anxiety amongst the caregiver sample, suggesting that perhaps the process of forgiveness and its benefits might be altered by the unique circumstances of this population.

Additionally, the current study provides the groundwork for the qualitative coding of transgressions reported by individuals who are also asked to complete the EFI. The objective features of transgressions have not yet been explored and may prove to be extremely important in future research and in the ability to fully interpret results on the EFI. Despite the limitations of this study, which most notably include a small caregiver sample, it provides evidence that further exploration of the forgiveness construct and its correlates is an important line of research, particularly in its application to older women, and familial caregivers who appear to be having a distinct experience. Future research could add to the forgiveness and caregiver literature through the continued exploration of the construct's meaning with this understudied population. With a larger sample size and perhaps exploration of a more recent transgression, much could be learned. Additionally, it has been suggested that forgiveness could be a particularly helpful resource for caregivers and their care recipients coping with age-related deficiencies (Hill, 2010) and

the current findings broadly support the benefits of forgiveness in an aging population. Additionally, increased forgiveness may aid marital relationships in preserving the well-being of their relationship in the context of adverse events, including illness and cognitive decline in late life regardless of whether one serves as a caregiver.

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Appendix A

Report of the Transgression Instructions

"Please consider a single time when you were most hurt by something your spouse said or did to you. We would like you to describe the hurt in order for us to understand what you were feeling at that time. It may help you to close your eyes and imagine yourself back in the situation. As you think back to that particular event, please try to include such details as where you were, who was there, what you were doing before, during and after the event, what physical sensations you experienced, and what emotions you were feeling during that time. Also try and think about how long it took for you to overcome the hurt and what aided you in doing so. Please provide as much detail as you need to describe the circumstances of this particular event in your life, and take as much time as you need to do so."

Appendix B

Narrative Coding System

Participant ID: _____ Rater: _____

1. Where was the respondent at the time of the reported transgression? Does she report being at:
   _____Home
   _____In public (store, park, outing, restaurant)
   _____Other: _____
   _____Not Disclosed
   Confidence in your decision (0-100%): _____

2. Were other people present?
   _____ Just respondent and husband
   _____ Friends
   _____ Other family (children, siblings, parents, in-laws)
   _____ Strangers/Unfamiliar people in public venue
   _____ Other: _____
   _____ Not Disclosed
   Confidence in your decision (0-100%): _____

3. Was the wife doing something right before the transgression took place? Does the respondent report:
   _____ Engaging in a task (activity or conversation, working, preparing for an event)
   _____ Ignoring her husband (walking away, leaving the room)
   _____ Other: _____
   _____ Not Disclosed
   Confidence in your decision (0-100%): _____

4. What did the respondent do while this event was happening? Does she report:
   _____ Contacting a source of support (calling a friend, a relative, speaking to a therapist)
   _____ Ignoring her husband (walking away, leaving the room, talking to someone else present)
   _____ Behaviorally reacting (yelling at him, crying, engaging in a distracting activity)
   _____ Other: _____
   _____ Not Disclosed
   Confidence in your decision (0-100%): _____

5. What does the wife report doing right after the transgression has taken place? Does she report:
   _____ Contacting a source of support (calling a friend, a relative, speaking to therapist)
   _____ Ignoring her husband (walking away, leaving the room, talking to someone else present)
   _____ Behaviorally reacting (yelling at him, crying, engaging in a distracting activity)
   _____ Other: _____
   _____ Not Disclosed
   Confidence in your decision (0-100%): _____

6. What physical sensations are reported? (Select all that apply). Does the wife describe having:
   _____ Dizziness (feeling lightheaded)
   _____ GI difficulties (stomach pain, nausea, vomiting)
   _____ Changes in temperature (sweating, fever, chills)
   _____ Shortness of breath/heart racing/palpitations
   _____ Trembling/Shaking
   _____ Other: _____
   _____ Not Disclosed
   Confidence in your decision (0-100%): _____

7. What were the emotions described because of the transgression? (Select all that apply)
   _____Anger/Frustration/Irritability
   _____Anxious/Vulnerable
   _____Ashamed/Guilty
   _____Depressed/Sad/Grief
   _____Hurt
   _____Jealousy/Resentment/Mistrust
   _____Other: _____
   _____Not Disclosed
   Confidence in your decision (0-100%): _____

8. What is the nature of the transgression? Does the wife report that her husband has been:
   _____ Arguing (picking a fight, verbally threatening, taking the side of other than wife)
   _____ Criticizing wife (appearance, behavior, decision-making)
   _____ Having an extramarital affair
   _____ Engaging in inappropriate behavior (drinking in excess, over spending family funds) that results in worry or mistrust
   _____ Ignoring/Being unsupportive toward wife or children (regarding wife or child's emotional or physical health, goals, decisions)
   _____ Not helping (with chores, raising children)
   _____ Other: _____
   Confidence in your decision (0-100%): _____

9. Does the wife report that this is a single event or something that occurred repeatedly during her current marriage?
   _____ One time occurrence
   _____ Happened repeatedly
   _____ Unclear
   Confidence in your decision (0-100%): _____

10. Does the wife indicate that the situation has been fully resolved?
   _____Resolved
   _____Unresolved
   _____Not disclosed
   Confidence in your decision (0-100%): _____

11. Did the husband apologize?
   _____Apology
   _____No apology
   _____Not disclosed
   Confidence in your decision (0-100%): _____

12. Does the wife report what helped to overcome the situation? If she reports more than one of the following, please rank order their importance based on the wife's report.
   _____Consideration/Conceptualization of past positive experiences with husband
   _____Counseling
   _____Discussion with husband
   _____Faith/Religion
   _____Support of family/friends
   _____Not Disclosed
   _____Other: _____
   Confidence in your decision (0-100%): _____