

ASSESSING FORGIVENESS: DEVELOPMENT OF A BRIEF, BROADLY APPLICABLE
SELF-REPORT MEASURE

by

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Assessing Forgiveness: Development of a Brief, Broadly Applicable Self-report Measure

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Abstract

Forgiveness is a construct that has captured the interest of researchers and practitioners across various fields, from philosophy to biology; however, defining and measuring forgiveness has been a challenge because of its complex nature. By drawing on relationships discovered in past studies, reviewing definitions across disciplines, and noting weaknesses in current forgiveness measures, the task of developing a broadly applicable forgiveness measure with strong theoretical and psychometric roots resulted in the creation of the General Measure of Forgiveness (GMF).

The GMF is a brief, Likert response questionnaire that is appropriate for both relationship and non-relationship transgressions; heretofore, there has not been an established measure for non-relationship transgressions. This study was an initial investigation into the psychometric properties of the GMF. In an online design, college participants ($n=343$) were administered the GMF along with an established interpersonal measure of forgiveness, the Enright Forgiveness Inventory (EFI; Enright & Rique, 2004), and other measures of theoretically related and unrelated constructs. For the forgiveness measures, participants completed the GMF and EFI (order counterbalanced) in response to the same self-generated relationship transgression, then completed the GMF in response to a self-generated non-relationship transgression.

Results supported the internal consistency of the GMF (Cronbach's alphas of .93 for both relationship and non-relationship forgiveness) and an exploratory factor analysis identified a primary factor accounting for about 30% of the total item variance. Convergent and discriminant validity analyses resulted in largely predicted relationships (e.g., $r = .81$ for $\text{GMF}_{\text{relationship}}$ and

EFI; $r = .78$ for GMF_{non-relationship} and a single-item assessment of forgiveness; $r = -.26$ for GMF_{relationship} and anger and aggression).

These results are encouraging as use of the GMF could open new areas of research in non-relationship forgiveness and enhance research and application of relationship forgiveness. Specifically, the GMF holds promise for improving research by providing a brief, non-proprietary, and broadly applicable measure of forgiveness. Broadly, the study suggests that a general measure of forgiveness is feasible.

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Assessing Forgiveness: Development of a Brief, Broadly Applicable Self-report Measure

Background

“To err is human, to forgive divine” (anonymous).

Part of the human condition is to hurt, both to cause and to receive hurt. Salient reminders of the presence of hurt in our world include the events of 9/11, the shootings that occurred at Virginia Tech, and the conflict in the Middle East. Although these events are more recent, the occurrence of person-inflicted hurt is no stranger to history. The opening quote suggests that these occurrences are as old as humankind and as certain as human mortality to continue. Though the violent events listed are extremes and uncommonly experienced, hurt is also an everyday occurrence, whether by being the victim of a crime or by experiencing conflict with a family member or friend.

The response to person-inflicted hurt has its roots in biology and evolutionary processes as well as religion and moral codes (for a review see Newberg, d’Aquili, Newberg, & deMarici, 2000). Ancient in existence, forgiveness as a response to person-inflicted hurt has long been a prominent topic for discussion. Forgiveness has been studied by a variety of disciplines, including religion, philosophy, criminology, political science, sociology, communications, medicine, and psychology. Perhaps the oldest investigations come from religion and philosophy. Indeed, the five major religions of the world: Christianity, Islam, Hinduism, Buddhism, and Judaism, place an emphasis on the importance of forgiveness (Ransley, 2004). Within psychology, writings on forgiveness have increased, perhaps because of its interdisciplinary relevance and the power forgiveness seems to hold. Publications have ranged from theoretical models (e.g., Enright & the Human Development Study Group, 1991; Hargrave, 1994; Worthington, 2006) to case studies (e.g., Cairns, Tam, Hewstone, & Niens, 2005; Staub, 2005) to

psychotherapy guides (e.g., DiBlasio, 1998; Malcolm, Warwar, & Greenberg, 2005; Worthington, 2006) to self-help guides (e.g., Enright, 2001) to exploration of the benefits (e.g., Fitzgibbons, 1986; Freedman & Enright, 1996; Hunter, 1978; Witvliet, Phipps, Feldman, & Beckham, 2004) and dangers in forgiving (e.g., Bass & Davis, 1988; Katz, Street, & Arias, 1997; Lamb, 2002), to research on the empirical assessment of forgiveness (e.g., Enright & Rique, 2004; Hargrave & Sells, 1997; McCullough, Rachal, Sandage, Worthington, Brown, & Hight, 1998; Wade, 1989). Although the number of forgiveness studies has increased over the past twenty years, forgiveness research is still in its infancy, with many unanswered questions (for a review see Worthington, 2005).

Conceptualizing Forgiveness

Two central pieces to the advancement of empirical research on forgiveness are a well-defined understanding of what forgiveness is and a theoretically and psychometrically sound assessment tool. Without a well-defined, agreed upon definition of forgiveness, research on the subject cannot be combined in a meaningful way and operationalizations are likely to be problematic. Forgiveness, though a definable act of giving up resentment, is also a complex and abstract concept (Griswold, 2007). There seems to be more consensus on what forgiveness is *not* than on what it is. Forgiveness is *not* tolerating injustice, forgetting, condoning wrongdoing, excusing wrongdoing, pardoning, exonerating, forgoing the right to punish, letting time pass to heal, or accepting the transgression (Enright & Fitzgibbons, 2000; Enright, Freedman, & Rique, 1998; Hargrave, 1994; North, 1987).

Researchers have conceptualized forgiveness in a variety of ways, including forgiveness as a process where there is movement away from negative feelings (e.g., anger, hurt, sadness, and shame), negative cognitions and negative cognitive processes (e.g., thoughts of revenge and

rumination), and negative actions (e.g., retaliation and avoidance; DiBlasio, 1998; Enright & Fitzgibbons, 2000; Hargrave, 1994; Mahoney, Rye, & Pargament, 2005; Malcolm et al., 2005; McGary, 1989; Wade, 1989; Worthington, 2006). Forgiveness has also been conceptualized as a choice (DiBlasio, 1998; Enright, 2001; Worthington, 2006), as a prosocial motivational change within the transgressed party (DiBlasio, 1998; McCullough, 2001; McCullough, Finchman, & Tsang, 2003), and as a stress and coping strategy (Worthington, 2006). A primary divergent point among the definitions of forgiveness is whether negative feelings, actions, and thoughts about the transgressor are replaced with positive ones (e.g., Enright & Rique, 2004; McCullough, 2001; North, 1987; Worthington, 2006) or whether neutral feelings, actions, and thoughts are sufficient for forgiveness (e.g., Gordon, Baucom, & Snyder, 2000; Mahoney et al., 2005; McGary, 1989; Temoshok & Chandra, 2000; Thoresen, Harris, & Luskin, 2000; Yamhure Thompson & Snyder, 2003). While there are disparities among the definitions, there are also commonalities, including that forgiveness is a process and that it is a change in direction from negative reactions to more positive ones following a transgression. The articulation of these two core definition points is not meant to suggest that further refinement is unnecessary, but rather it serves as a guide to the focus of the current research: creating a theoretically and psychometrically sound assessment tool for general forgiveness irrespective of whether there was a relationship with the transgressor.

Current Paper's Conceptualization of Forgiveness

With diverse understandings of forgiveness existing in the literature, as cited above, it is important to define how I conceptualize the construct, and how this influenced the decision-making in the creation of the forgiveness questionnaire. Foremost, like most other researchers, I conceptualize forgiveness as a process, not as a discrete act. This view is inline with researchers

such as Worthington (2006), who understands forgiveness as change over time and recognizes that it is difficult to know whether a person has fully forgiven another forever, and with McCullough, Fincham, and Tsang (2003), who fashioned the term *trend forgiveness*, which is the amount of forgiveness over time that a person has toward a transgressor. It is also consistent with process models of forgiveness, such as Enright and Fitzgibbons' (2000). I agree that forgiveness does not necessarily move unidirectionally. I conceptualize forgiveness as fluctuating both toward and away from some absolute endpoint. This view is supported by Noll (2005), who noted the necessity of multiple forgiveness assessments at critical time periods in order to get a more accurate picture of forgiveness among sexual abuse victims.

Another core component of my forgiveness definition, as with most forgiveness definitions, is the release of negative emotions, cognitions, and behaviors (e.g., Enright & Rique, 2004; McCullough et al., 2003; Wade, 1989; Worthington, 2006). Empirical research supports the negative correlation between forgiveness and negative emotions, such as anger (Berry, Parrott, O'Connor, & Wade, 2001; Coyle & Enright, 1997; Konstam, Chernoff, & Deveney, 2001; Rye, Folck, Heim, Olszewski, & Traina, 2004; Rye, Loiacono, Folck, Olszewski, Heim, & Madia, 2001), anxiety (Coyle & Enright, 1997; Reed & Enright, 2006; Subkoviak, Enright, Wu, Gassin, Feedman, Olson et al., 1995), and depression (Brown, 2003; Reed & Enright, 2006; Rye et al., 2004; Rye, Pargament, Pan, Yingling, Shogren, & Ito, 2005; Witvliet et al., 2004). A growing body of literature supports the link between forgiveness and negative cognitions as well as negative cognitive processes, particularly rumination and avoidance (Berry et al., 2001; Brown, 2003; McCullough, Bellah, Kilpatrick, & Johnson, 2001; McCullough, Bono, & Root, 2007; McCullough et al., 1998), and the link between forgiveness and positive cognitions, particularly perspective taking (Brown, 2003; Konstam et al., 2001) and finding meaning in

experiencing the transgression (Reed & Enright, 2006). Finally, research supports a negative correlation between forgiveness and negative behaviors, specifically vengeance (Brown, 2003; McCullough et al., 2001).

For the current research, I offer this definition of forgiveness: *Forgiveness is a process that moves toward the end result of releasing all negative feelings (particularly anger, revenge, hatred, and sadness), all negative cognitions and negative cognitive processes (primarily rumination, denial, thoughts of revenge, and confusion), and all negative behaviors (primarily retaliation and avoidance) directed toward the transgressor, a group, or an entity that wronged the person.*

Review of Current Forgiveness Assessment Measures

Theoretically and psychometrically sound assessment tools enable researchers to empirically study hypothetical constructs, draw more precise conclusions by limiting type II error (through reliability), and draw accurate conclusions by limiting type I error (through validity). In general, there are two classifications for existing forgiveness measures: dispositional and offense-specific (McCullough, Hoyt, & Rachal, 2000). Dispositional forgiveness measures treat forgiveness as an individual difference. These measures are filled out as a general response to transgressions and not to a specific incident. Offense-specific measures assess forgiveness toward an identified transgressor for specific transgression(s). Some offense-specific measures lend themselves more toward *transgressor-specific* assessment, as these measures are used more to evaluate forgiveness toward an identified person who caused harm over a period of time, including more than one incident (e.g., divorce). Another kind of offense-specific forgiveness assessment is *situation-specific* measures. These measures focus on a particular incident perpetrated by a particular person. While transgressor-specific measures and

situation-specific measures are not necessarily mutually exclusive, it is often the case that the wording and directions lend themselves to a particular category. I have chosen a more situation-specific wording for the current research for its broad applicability (both persons who experience a relationship transgression or a non-relationship transgression can be assessed), and for its specificity.

Currently, a number of assessments exist as dispositional measures of forgiveness (e.g., Berry et al., 2001; Brown, 2003; Mauger, Perry, Freeman, Grove, McBride, & McKinney, 1992) and as offense-specific measures (e.g. Hargrave & Sells, 1997; McCullough et al., 1998; Rye et al., 2001; Subkoviak et al., 1995; Trainer, 1981; Wade, 1989). Thus, it is necessary to justify the endeavor of creating a new offense-specific forgiveness measure, the GMF, especially since the Enright Forgiveness Inventory (EFI; Enright & Rique, 2004) and the Transgression-Related Interpersonal Motivations Inventory (TRIM; McCullough et al., 1998) are the most widely used measures for research and are regarded as *good* measures in the area (Barnes, 2003; Worthington, Sandage, & Berry, 2000). The key difference between my offense-specific measure and existing measures is applicability. There is not an established measure for non-relationship forgiveness, where the victim of hurt does not have an existing relationship with the transgressor. Criminal victimization perpetrated by a stranger is a common example of a non-relationship transgression. As I will present in the next session, the existing offense-specific measures are awkward at best and insufficient at worst for use on non-relationship forgiveness. Furthermore, a forgiveness measure that is user-friendly, brief to administer, represents a complete sample based on its theory, and is available for researchers and clinicians to use at no cost, are improvements that add to the measure's potential utility.

Highlighted History of Offense-Specific Forgiveness Assessments

Perhaps the first empirically tested offense-specific forgiveness assessment was created by Mary Trainer (1981). Her assessment is specifically geared toward a separated and or divorced individual and asks questions about the ex-spouse. Trainer conceptualized forgiveness among eleven dimensions: the degree of self acceptance, self perception, perception of the transgressor, sense of personal power, social power in relation to the transgressor, quality of the inner response, religious ideology or values, mode of coping with anger, manifestation of forgiveness, nature of the relationship with the transgressor, and the sentiments or affectivity toward the transgressor. She divided forgiveness into three types: role-expected forgiveness (working toward forgiveness motivated by the expectation of others), intrinsic forgiveness (working toward forgiveness motivated by the person), and expedient forgiveness (working toward forgiveness motivated by stress and coping). Her general forgiveness measure consists of 9 questions, some on an eight-point Likert scale and some open-ended. The scope of the measure is broad and assesses feelings, thoughts, and actions toward the transgressor. Trainer's study (1981) found a Cronbach's alpha of .77 and used theory driven hypotheses about how the general measure and the role-expected, expedient, and intrinsic forgiveness reason scales would correlate to one another as a test of their validity.

Trainer's measure provides adequate information about the various responses to transgressions, some correlates, and a person's individual process toward forgiveness. Despite these strengths, the measure's applicability is severely limited. Trainer both designed the measure for and tested the measure on separated and/or divorced couples. For this reason, some of the questions explicitly ask about the separation and/or divorce and, therefore, would not be applicable to other transgressions. The measure's utility is also weakened by the open-ended

questions included in the measure, as they require more time to respond to and are subject to subjective scoring by the administrator. At a theoretical level, the measure inadequately assesses the broad range of responses to transgressions. For example, the measure asks about two emotions, anger and “positive feelings.” While “positive feelings” is inclusive, negative feelings besides anger are not addressed. Previous criticisms of the measure have been that it is unclear and difficult to identify whether some questions are asking about a thought, affect, behavior or a combination of thoughts, affect, and or behaviors (Sarinopoulos, 1996; Wade, 1989).

The next major offense-specific forgiveness assessment was created by Susan Wade (1989): the Wade Forgiveness Scale (WFS). The scale consists of 83 five-point Likert questions that divide forgiveness into three main dimensions: cognitive, affective, and behavioral. Factors included in the cognitive domain are revenge, freedom from obsession, affirmation or understanding the transgressor, and victimization. There are a number of specific feelings assessed in the affective domain, such as betrayal, joy, acceptance, rage, and compassion. In the behavioral domain avoidance, letting God help, conciliation toward transgressor, and holding a grudge are assessed. Wade made considerable contributions to the assessment of forgiveness by creating specific thought, emotion, and behavior items and by thoroughly analyzing her measure. Reliability estimates for her factors ranged from .79-.95 using Cronbach’s alpha, and she used participant ratings from college students and adults in a Sunday school class to categorize questions as either falling in the forgiveness category, the unforgiveness category, or the questionable category (Wade, 1989).

Despite the advances of the WFS, it too has limited applicability. The WFS is specific to relationship transgressions. Questions such as “I have a responsibility for this relationship too” are incompatible with non-relationship forgiveness. The measure is also specific to religious

individuals with a strong reference to God throughout the measure. Debatably, the WFS is theoretically limited by its definition of forgiveness, which includes the replacement of negative reactions with positive reactions toward the transgressor. Although the WFS excluded open-ended questions, it too is a time consuming measure with 83 questions.

The Transgression-Related Interpersonal Motivations Inventory (TRIM; McCullough et al., 1998) is a measure that defines forgiveness as a motivation. The TRIM has two scales: revenge and avoidance, which were taken from the WFS. Through factor analysis, McCullough and colleagues retained 5 revenge questions and 7 avoidance questions to make up the new measure. Psychometrically, analyses of the TRIM support the two factor model proposed ($\chi^2(53, N = 238) = 190.53, p < .001$ and a comparative fit index = .94), provide adequate internal consistency (Cronbach's alpha of .86 and .90 for the respective scales), and provide some evidence for discriminant and convergent validity. Advantages to using the TRIM include its condensed length and ease of administration. However, the TRIM has limited applicability, as a relationship is assumed between the person and the transgressor (e.g., I cut off the relationship with him/her.) and the measure's questions are unsuitable for a transgressor that is deceased (e.g., I live as if he/she doesn't exist, isn't around.). Additionally, the TRIM is a forgiveness motivation measure that only assesses avoidance and revenge; therefore, the forgiveness components of other thoughts, emotions, and behaviors are not assessed. (McCullough et al., 1998)

The final measure to be reviewed is the Enright Forgiveness Inventory (EFI; Enright & Rique, 2004), which is currently considered a standard assessment of interpersonal forgiveness and is widely used (Barnes, 2003; Worthington et al., 2000). The EFI produces 10 scale scores: the positive cognition subscale, the negative cognition subscale, the positive affect subscale, the

negative affect subscale, the positive behavior subscale, the negative behavior subscale, the total cognition subscale, the total affect subscale, the total behavior subscale, and the 60-item EFI total score. Each question consists of a word or a short phrase which is answered on a six-point Likert scale. All scales have shown excellent internal reliability, with a Cronbach's alpha of .93 or higher. Cross-structure analyses provide discriminant validity between the total EFI and the Crowne-Marlowe Social Desirability Scale ($r = -.001$, where forgiveness does not correlate with social desirability), the negative affect subscale of the EFI reverse scored and the Beck Depression Inventory for middle-aged adults ($r = -.43$, where more positive affect in reference to forgiveness correlates to fewer depressive symptoms), and the total EFI and the State Anxiety Scale ($r = -.44$ to $r = -.30$, where more forgiveness is associated with less state anxiety). The internal structure analysis of the EFI reveals that the cognition, affect, and behavior subscales correlate between .80 and .87, which justifies a total EFI score and a unidimensional construct. (Subkoviak et al., 1995)

The EFI, although a valued interpersonal assessment of forgiveness, has its own limitations. One is that it does not allow for the assessment of forgiveness in non-relationship transgressions. For example, the question, "I would attend his/her party" would not make sense for a victim of crime to answer who did not have a relationship with the perpetrator. Also, although the EFI asks in the orienting section of the measure whether the offender is still alive, some of the questions do not make sense to answer if the offender is dead, for example, "I hope he/she does well in life." For these reasons, the EFI is limited in the kinds of situations for which it is applicable. Both an asset and a drawback to the EFI is its orienting section, as it is thorough (asks several questions about the transgression including writing a description of "what happened when this person hurt you") but also time consuming. While this section ensures that

the person is concentrating on a specific transgression and remembering it, having an open-ended, paragraph-length response inhibits a time conscious assessment. In addition, because the EFI samples multiple feelings, behaviors, and cognitions, the 60-item measure is lengthy and takes approximately 40-minutes to complete (Barnes, 2003).

Theoretically the EFI, as with the WFS, limits the definition of forgiveness as the change from negative reactions to positive reactions, instead of neutral reactions. This may be particularly problematic for non-relationship transgressions where the crime is heinous and the individuals' contact is limited. Finally, use of the EFI is further hindered by its proprietary license; the measure costs between 60¢ and 80¢ per use depending on the bulk purchased. The proprietary nature of the EFI limits its availability to researchers and clinicians alike and can inhibit research conducted on forgiveness (for a review of offense-specific measures see Table 1).

The General Measure of Forgiveness

I thought it was important to create an assessment tool for the study of forgiveness that was offense-specific but broadly applicable, both in terms of its domains for use and ease of administration. As a broad measure, it should be applicable for both relationship forgiveness, where the transgressor is known and has a relationship with the victim, and non-relationship forgiveness, where the transgressor may not be known and does not have a relationship with the victim. My goals for the measure were that it would 1) be based on empirical evidence, 2) provide meaningful data, 3) have broad applicability, 4) be easy to administer, and 5) have condensed length. I took into consideration the shortcomings of existing measures, as cited previously, in an attempt to create a strong research measure of general forgiveness, as well as a meaningful measure for clinicians that would be accessible for use and non-proprietary.

The need for a non-relationship measure of forgiveness, beyond the call for a general forgiveness measure, would allow researchers to determine the perhaps fundamentally different concept of non-relationship forgiveness. Does non-relationship forgiveness have different consequences than relationship forgiveness? Are stress responses to crime, such as post-traumatic stress, panic attacks, and paranoia, lessened by forgiveness? Is the process of forgiveness synonymous whether in relation to crime or interpersonal transgressions? These and other questions related to non-relationship forgiveness have the potential to be empirically researched and to guide questions concerning policy and health.

A general measure of forgiveness is also important for clinicians, as many treatment plans revolve around hurt: processing hurt, alleviating hurt, coping with hurt, and resolving hurt. Viewing forgiveness within the stress and coping model, debilitating symptoms of anxiety, fear, dissociation, and anger can be targeted through forgiveness focused goals. Evidence-based therapy and standards of care related to forgiveness require an applicable assessment of symptoms as well as a means to track progress. Specific incidences where an assessment of forgiveness may prove useful are child abuse cases, couples therapy, and post-traumatic stress cases. Beyond individual therapy settings, victims of crime may benefit from forgiveness assessment in policy driven victim-perpetrator interventions, such as restorative justice.

Creation of the GMF

Item generation for the initial GMF was begun by the author using her theoretical understanding of forgiveness and empirical relationships of forgiveness (as will be reviewed shortly). After an initial list of items was generated, three psychologists, who were members of her thesis research committee, were consulted to review the items for their clarity, theoretical relation, and range of positive and negative wording. Based on these reviews, some items were

revised or dropped and additional items were written. Appendix A shows the initial GMF in its entirety.

The design of the questions appearing on the initial GMF was based on previous measures; specifically, the wording “to what extent” was adopted from Trainer (1981) and all of the offense-specific measures of forgiveness reviewed (i.e., Enright, 2004; McCullough et al., 1998; Trainer, 1981; Wade, 1989) use a Likert rating scale. A nine-point Likert scale was chosen for its close approximation to a continuous variable and the utility of its specificity (see Kline, 2000). None of the questions were taken directly from previous measures; however, the direct, self-report question about whether the person has forgiven the transgressor is close to Trainer’s (1981).

In creating the GMF, a thorough review of forgiveness was undertaken with specific emphasis on what forgiveness is, both empirically and theoretically. Perhaps because of humans’ higher cognitive status and our enhanced ability to label our experiences, forgiveness is a complex label for a specified combination of feelings, thoughts, and behaviors. Taken individually, affective components of anger, hatred, sadness, and anxiety are correlates of forgiveness. The same can be said for specified cognitive and behavioral components. However, I argue that the combination of these specified components *is* forgiveness. In describing the GMF, subcomponents can be parceled out: affective correlates, cognitive correlates, behavioral correlates, and motivations. Though these subcomponents exist, the measure when taken as a whole is forgiveness and to describe the measure as pieces pasted together in hopes of discriminating between various levels of forgiveness is misleading. As such, a summed score of the measure is required for interpreting levels of forgiveness. With that being the case, the following evidence informed the pieces necessary for a forgiveness measure.

Nine questions on the initial GMF assessed the specific *affective* components of forgiveness, with six reverse scored items. Eight of the questions asked about the specific affective reactions of anger, peacefulness, sadness, anxiety, easiness, feeling controlled, freedom, and hate and one question asked broadly about negative affect. Common emotional reactions to experiencing hurt and transgressions are anger, hostility, sadness, and distress (Leary, Springer, Negel, Ansell, & Evans, 1998). These negative emotions are linked with unforgiving (Berry et al., 2001; Coyle & Enright, 1997; Konstam et al., 2001; Reed & Enright, 2006; Rye et al., 2001; Rye et al., 2004; Subkoviak et al., 1995; Witvliet et al., 2004).

Nine questions on the initial GMF assessed the specific *cognitive* components of forgiveness, with four reverse scored items. Eight of the questions asked about the specific cognitions and cognitive processes of rumination, denial, cognitive avoidance, cognitive ambivalence, perspective taking, learning, and optimistic thinking and one question asks about negative cognition in general. Rumination is both a predictor and mediator of outcomes after an injustice (for a review of rumination and trauma outcomes see Greenberg, 1995). Rumination is also positively related to aggressive acts after a perceived injustice (Collins & Bell, 1997) and is linked to unforgiveness (McCullough et al., 1998). Denial and cognitive avoidance were included in the measure because the forgiveness literature clearly states that forgiveness is not forgetting, or in this case trying to forget, that an injustice occurred (Enright et al., 1998; Enright & Fitzgibbons, 2000). Ambivalence was included because of the understanding that forgiveness is a process and that individuals fluctuate toward and away from forgiveness (Noll, 2005). Therefore, an individual in the process of forgiveness may not have much forgiveness at a specific assessment point, but he or she may have more forgiveness at another time. Perspective taking was included because of its link to increased forgiveness, with a suggested relationship to

empathy (Brown, 2003; Fincham, Paleari, & Regalia, 2002; Konstam et al., 2001; McCullough et al., 2003). Positive thinking or optimism, such as finding meaning in experiencing transgressions, has been linked with increased forgiveness as well (Reed & Enright, 2006).

Eight questions on the initial GMF assessed the *behavioral* components of revenge and avoidance, with three reverse scored items. Common behavioral responses to hurt and transgressions include seeking revenge and avoidance (Kremer & Stephens, 1983; McCullough et al., 2003). Both of these behaviors are negatively related to forgiveness (McCullough et al., 2003). One question on the initial GMF asked whether the person had told other people that he or she had forgiven the transgressor. This question served as an observable check of behavior, as behavioral expressions of forgiveness are central to the definition of forgiveness. While telling another person about forgiving is not required of forgiveness, it is important to recognize that forgiveness is not just an internal process; forgiveness is a combination of specific thoughts, feelings, behaviors, and motivations that holistically embody it. There were also questions related to body tension, which is a behavioral expression of emotion and is often a symptom of mental stress (American Psychiatric Association, 2000) and questions that assessed behavioral coping (e.g., To what extent are you acting like yourself, the way you were before the incident occurred?).

One question on the initial GMF assessed forgiveness by asking directly how much the person had forgiven his or her transgressor. This question was used both for validity purposes (see McCullough et al., 1998 and Subkoviak et al., 1995) and to complete specific components of forgiveness that are essential but that were not otherwise assessed.

Two questions on the initial GMF assessed “want” motivation and “ought” motivation to forgive. Research has emphasized the importance of motivation to forgive and has linked it to

increased forgiveness in close relationships (Bono, McCullough, & Root, 2008; Finkel, Rusbult, Kumashiro, & Hannon, 2002).

In sum, 29 questions assessed using a nine-point Likert scale made up the core section of the initial GMF. This section served to assess the specified affective, cognitive, behavioral, and motivation components that were scored to inform where the individual was in the process of forgiving. In addition to the summed section, the initial GMF included an orienting section (4 questions) and a follow-up motivation section (24 questions). The orienting section served to focus the individual's mind on the transgression and remind him or her of the details. Two questions on the orienting section were assessed using a nine-point Likert scale and two questions were multiple choice. The orienting section was not summed as part of the GMF score, but could be used in a meaningful way to help understand how an individual currently perceives the hurt caused by the transgression. The 24 follow-up motivation questions assessed specific motivational reasons for why a person is (not) thinking about forgiving or has(n't) forgiven on a nine-point Likert scale. From these 24 questions two sets were composed of 12 questions each, 12 assessing motivation to forgive (section A) and 12 assessing motivation not to forgive (section B). The set of motivation questions answered by an individual depended on the responses of the last two items of the core section. If the individual endorsed some *want* motivation or *should* motivation, then follow-up section A was provided. If the individual endorsed no *want* motivation or *should* motivation, then follow-up section B was provided. This last section, the motivation section, could be optional for research and clinical purposes and was not used for scoring purposes. However, specific motivation questions may have particular utility in certain kinds of research and in the therapy setting. In all, the initial GMF consisted of

57 items; although each participant only answered 45 items based on whether there was motivation to forgiveness or not to forgive.

The overall goal of the initial GMF was to capture a broad sampling of items that related to the affective, cognitive, behavioral, and motivational correlates of forgiveness, which were informed by previous research and by the current conceptualization of forgiveness, that would meaningfully discriminate among levels of forgiveness. This study had the intention of refining the initial GMF into a revised version that would have acceptable psychometric properties. This guiding goal informed the hypotheses and aims that follow.

Goals and Hypotheses

The initial General Measure of Forgiveness (GMF; Law, 2008) was designed to address previously-noted shortcomings of existing forgiveness assessments. It is a Likert self-report questionnaire, scored by summing the 29 core items (see above), reverse scoring negatively worded questions. Higher scores on the GMF indicate that a person is closer to forgiving his or her transgressor for an offense-specific incident. The GMF has a brief, user-friendly design and is broadly applicable, relevant for assessing forgiveness in both relationship and non-relationship transgressions.

This study's central objective was to investigate the initial GMF and refine it into a psychometrically sound measure. Specifically, the study investigated the internal structure of the GMF and investigated whether the individual pieces of the measure (i.e., affective components, cognitive components, behavioral components, and motivation components) cohered. Additionally, the study assessed the cross-structure of the GMF using convergent and discriminant validity with the constructs of forgiveness, social desirability, state cognitive anxiety, state somatic anxiety, anger and aggression, and religiosity. At an exploratory level, the

study compared how relationship and non-relationship forgiveness differ in their links with other constructs and how the factor structure of the GMF differs with respect to the type of relationship involved.

Following from the study's goals, these specific hypotheses were tested:

H1: The GMF will be internally consistent. This will be evidenced by a Cronbach's alpha of .80 or higher for both relationship and non-relationship forgiveness.

H2: The items on the GMF will cohere, either through a unidimensional factor or multiple factors that are highly correlated with each other.

For the convergent validity analyses, H3 & H4 will be tested:

H3: The GMF will be highly related to the Enright Forgiveness Inventory (EFI) for relationship forgiveness. The relationship between the GMF and EFI will be stronger than the discriminant validity relationships.

H4: The GMF (excluding the self-reported forgiveness question) will be highly related to reported forgiveness. This relationship will be stronger than the discriminant validity relationships and will be true for relationship and non-relationship forgiveness.

For the discriminant validity analyses, H5 through H8 will be tested:

H5: The GMF will be unrelated or weakly related to social desirability. This relationship will be the weakest relationship among the discriminant validity analyses and will be true for relationship and non-relationship forgiveness.

H6: The GMF will be related to state cognitive and state somatic anxiety for both relationship and non-relationship forgiveness. This will be evidenced by a negative relationship with a strength weaker than the convergent validity relationships, but stronger than the GMF and social desirability relationship.

H7: The GMF will be related to anger and aggression for both relationship and non-relationship forgiveness. This will be evidenced by a negative relationship with a strength weaker than the convergent validity relationships, but stronger than the GMF and social desirability relationship.

H8: The GMF will be related to religiosity for both relationship and non-relationship forgiveness. This will be evidenced by a positive relationship with a strength weaker than the convergent validity relationships, but stronger than the GMF and social desirability relationship.

In addition to the above stated hypotheses, exploratory analyses will be performed on the GMF's orienting and motivation sections, as well as on the demographic information collected.

Method

Design

An online survey design was chosen for the study. The survey was managed by SurveyMonkey.com and included secure sockets layer (SSL) security to ensure confidentiality and anonymity.

Participants

A sample of 366 college students participated in the study during the fall semester of 2008. Participants were enrolled through the Sona experiment site at Virginia Tech and were given the option of receiving extra credit for their participation. Close inspection of the data revealed a number of incomplete surveys and some surveys with incompatible responses (e.g., recalling a relationship transgression when asked to recall a non-relationship transgression). After removing the relatively blank surveys and the inappropriate portions of the surveys, a total of 343 surveys (94%) were analyzable in at least one of the analyses. It should be noted that

entire surveys were only removed for those who withdrew from the study near the beginning or whose answers were inappropriate for multiple sections of the survey. Of the 343 participants, 253 (74%) were females and 90 (26%) were males. The mean age was 19.2 with 85% identifying themselves as Caucasian and 86% who were neither married nor in a committed relationship. Note, the population statistics for undergraduate enrollment at Virginia Tech for 2007 were 73% Caucasian, 14% non-Caucasian (African-American, Asian/Pacific Islander, Hispanic/Latino, and Native American), 2% foreign, and 11% no report of ethnicity (Institutional Research, 2007).

Procedure

After participants signed up through the Sona experiment site to participate in a study titled “Exploring Conflict,” they were given a link to the study’s website that was managed by SurveyMonkey.com. To begin the study, participants had to agree that they had reviewed the information page provided to them and that they understood their rights.

The study began with basic demographic questions (see Appendix B) that were used to describe the sample. Participants next completed three measures: the Brief Anger-Aggression Questionnaire (BAAQ; Maiuro, Vitaliano, & Cahn, 1987), the state portion of the State-Trait Inventory for Cognitive and Somatic Anxiety (STICSA; Ree, MacLeod, French, & Locke, 2000), and the orienting section of the Enright Forgiveness Inventory (EFI; Enright & Rique, 2004). Instructions for the EFI orienting section asked participants to report on a time when someone close to them hurt them unfairly and deeply; if this had happened more than once, they were directed to report on the time that they were hurt the most. Upon completion of the EFI orienting section, participants were counterbalanced to receive either the rest of the EFI or the initial GMF (core and motivation sections only). Before participants were given the second

forgiveness questionnaire, which they answered in response to the same self-generated relationship transgression, they completed the Santa Clara Strength of Religious Faith Questionnaire (SCSORF; Plante & Boccaccini, 1997b) and the Marlowe-Crowne Social Desirability Scale (M-C SDS; Crowne & Marlowe, 1960). The SCORF and M-C SDS were inserted between the two forgiveness questionnaires to guard against cognitive fatigue and frustration at having to answer similar questions about their transgression.

After completing these measures and the second forgiveness questionnaire, either the EFI or the GMF, participants were asked if they or someone close to them had ever been the victim of a crime where the perpetrator was someone with whom a close relationship did not exist (i.e., a stranger or an acquaintance). If participants reported that they or someone close to them had been the victim of such a crime, they were asked to briefly describe the crime and were then directed to answer the GMF in its entirety (i.e., orienting section, core section, and motivation section) in response to this crime. If participants reported that they or someone close to them had not been the victim of such a crime, they were asked to report on a time when they or someone close to them was the victim of a non-relationship transgression (e.g., being judged unfairly by a group based on race, ethnicity, religion, or gender; receiving rude behavior from a stranger). Examples of non-relationship crimes and non-relationship hurts that are not crimes were provided to participants to clarify the distinctions between crime and non-crime. Participants then completed the GMF in its entirety based on the non-relationship transgression. Lastly, participants were given the option of entering their Virginia Tech personal identification (PID) in order to receive research credit; 98% of the sample received credit.

Measures

The Marlowe-Crowne Social Desirability Scale (M-C SDS; Crowne & Marlowe, 1960, see Appendix C) consists of 33 true-false questions. The measure is a widely used tool for assessing the “faking good” response style with empirically valid psychometric properties. For this study, the M-C SDS had a Cronbach’s alpha of .77.

The State-Trait Inventory of Cognitive and Somatic Anxiety (STICSA; Ree et al., 2000, see Appendix D) is a measure of state and trait cognitive anxiety as well as state and trait somatic anxiety. For this study, only the state portion of the STICSA was used, which assesses state cognitive and state somatic anxiety. The state measure consists of 21 four-point Likert questions and has good reliability (Cronbach’s alphas for the measure range from .88 to .89; Gros, Antony, Simms, & McCabe, 2007) and validity (Fisher z transformations revealed that the state STICSA measure correlated more with the State-Trait Anxiety Inventory, state scores (STAI; Spielberger, 1983) than the Beck Depression Inventory II (BDI-II; Beck, Steer, & Brown, 1996)). For this study, the STICSA had Cronbach’s alphas of .89 and .86 for state cognitive anxiety and state somatic anxiety, respectively.

The Brief Anger-Aggression Questionnaire (BAAQ; Maiuro, et al., 1987, see Appendix E) is a screening measure for anger and hostility. It consists of six five-point Likert questions. High scores on this measure are associated with greater anger and hostility. Reliability of the measure is adequate, with a reported Cronbach’s alpha of .82 and test-retest $r = .84$. In terms of the measure’s validity, it has statistically discriminated between a known violent sample and a known non-violent sample and a correlation of $r = .78$ was found between the BAAQ and the Buss-Durkee Hostility Inventory (BDHI; Buss & Durkee, 1957), which is a hostility measure

with well documented validity (Maiuro et al., 1987). For the current study, the BAAQ had a Cronbach's alpha of .75.

The Santa Clara Strength of Religious Faith Questionnaire (SCSORF; Plante & Boccaccini, 1997b, see Appendix F) is a measure of religiosity and consists of ten four-point Likert questions. Higher scores on this measure correspond with greater religiosity. The measure has reported Cronbach's alpha ranging from .94 – .97, split-half reliability of $r = .90 - .96$, and adequate convergent and discriminant validity (Plante & Boccaccini, 1997a; Plante & Boccaccini, 1997b). For this study, the SCSORF had a Cronbach's alpha of .98.

The Enright Forgiveness Inventory (EFI; Enright & Rique, 2004, see Appendix G for sample items from EFI) is a measure of interpersonal forgiveness and consists of 60 six-point Likert questions. Nine subscale scores (previously described) are produced by the measure as well as an overall score; higher scores on the measure correspond to a greater degree of forgiveness. The measure has reported Cronbach's alphas ranging from .93 – .98 and adequate convergent and discriminant validity (Sarinopoulos, 1996; Subkoviak et al., 1995). For this study, the EFI had a Cronbach's alpha of .99.

An exploratory factor analysis was carried out on the EFI for the purpose of comparing the results to the results of the factor analysis run on the initial GMF. Principal axis factoring and a quartimax rotation with Kaiser Normalization were used; the analysis revealed a primary factor accounting for 63% of the total variance both before and after rotation. Table 2 presents the factor analysis eigenvalue and percent of variance explained by the first factor. This supports the use of a summed score for the EFI in the current study.

The initial GMF (Law, 2008) consists of four orienting questions, 29 core forgiveness questions, and 24 specific motivation questions. Only the core items are summed, using a nine-

point Likert scale (for a review of how the measure was created see above). The psychometric properties of the GMF are reported in the results section below.

Open-ended Coding

Several open-ended items were part of the survey. They included responses that described both the relationship and non-relationship transgressions, identified whether the participant was the victim of the non-relationship transgression, and reported thoughts and feelings toward the transgressors of both the relationship and non-relationship transgressions. To categorize and analyze these responses, a psychologist experienced with open-ended analyses was consulted to create a coding scheme. First, all of the open-ended responses were read for commonalities and natural coding categories. Coding categories were chosen based on how well they distinguished among the responses and for their collective representation of the responses provided. Explicit directions for how to code each item as well as examples were provided to two undergraduate research coders. It should be noted that the coders worked independently and were allowed to ask for clarification during the process.

The following non-exclusive categories were used to code the relationship transgressions: physically hurt, manipulated/used for personal gain, victim of gossip, cheated on by intimate partner, abandoned/hurt by inaction, was lied to, and victim of spoken hurt that happened face-to-face. To code the non-relationship transgressions, the following mutually exclusive categories were used: personal injury crime, property crime, robbery, 9/11 transgression, 4/16 Virginia Tech shootings transgression, and non-relationship hurt but not a crime. Table 3 reports the inter-rater agreement (Cohen's Kappa) between the two coders for each of these categories. Based on Cohen's Kappa ($< .60$) and the pattern of codes given, some categories were removed. Two categories were removed for the description of the relationship transgression:

manipulated/used for personal gain and abandoned/hurt by inaction, as these categories were below the .60 agreement level and no pattern that explained the low agreement was evident between the coders. All of the non-relationship transgression categories were kept. Although the category 'robbery' had a Cohen's Kappa of .51, a pattern emerged to explain the low agreement; different definitions of robbery were used between coders. The robbery category was reconcilable. Additionally, for the non-relationship transgression description, categories were assigned based on whom the victim was (i.e., the participant, a person close to the participant, or not enough information provided).

For both the relationship and non-relationship transgressions, the following codes were used to categorize the reported thoughts and feelings toward the transgressors: indifferent, internalized hurt, externalized hurt, avoided hurt, moved on (e.g., self-growth/not bothered anymore), word 'forgiveness' appeared in response, if included word 'forgiveness' direction of forgiveness coded (i.e., forgiven, in process of forgiving, not forgiven), and the number of words in the response was counted. Table 4 displays the inter-rater agreement statistics for these categories. Again, based on the Kappa ($< .60$) and the pattern of codes, two categories were removed: avoided and moved on. Both of these categories were below the .60 inter-rater agreement and a pattern that explained the low agreement could not be identified.

For all of the final categories, the author reviewed the responses that received differing codes from the two research coders and provided one concluding code; so that each response had an agreed upon set of codes.

Results

Characteristics of Transgressions

Characteristics of relationship transgressions were reported on the orienting section of the EFI, with the addition of one question: “Currently, how deeply are you hurting because of this incident.” The nature of the reported transgressions varied; however, intimate partner cheating was the most frequently cited (22%), followed by hurtful face-to-face spoken transgressions (19%). Other coded categories included being lied to (15%), gossiped about (9%), and physically hurt (4%). Thirty-one percent of the transgressions either did not fit into a coded category or were not analyzable (e.g., description too vague). Although a large portion of the descriptions were uncodeable, 51% were perpetrated by a friend of the opposite sex. This is comparable to the EFI study where the most frequently cited transgression for college students involved a male-female relationship hurt (Subkoviak et al., 1995).

Almost all of the perpetrators of the relationship transgressions were still alive (98%) and generally the transgressions happened within the past two months, median of 45 days, though the range varied greatly (1-4,015 days). Therefore, most of the reported hurts were recently experienced. Also, noted from the orienting section, there was a meaningful change in the degree of hurt caused by the transgression, from when it initially occurred to when participants completed the survey. Initially the relationship transgressions caused an average 4.07 degree of hurt (*much hurt*, $\sigma^2 = .88$) on a scale of 1(*no hurt*) to 5(*a great deal of hurt*), with responses ranging from 2 to 5. At the time of the study, the average hurt was 3.30 degree of hurt (*a little hurt*, $\sigma^2 = 2.08$) on a scale of 1(*not at all*) to 9(*completely*), with responses ranging from 1 to 9. Essentially, the degree of hurt moved from being *much hurt* when the transgression occurred to *a little hurt* at the time of the study. Additionally, there was a significant relationship between

certain kinds of relationship transgressions and the degree of hurt reported. Participants who were physically hurt reported a greater degree of current hurt from the transgression ($r = .13, p < .05$) and participants who were cheated on reported a greater degree of initial hurt ($r = .17, p < .01$).

Characteristics of non-relationship transgressions were reported on the orienting section of the GMF. The nature of non-relationship transgressions varied more than the relationship transgressions; however, 53% were crimes. It is not surprising that the majority were crimes because the survey asked participants to report on a non-relationship crime if possible before asking for a non-crime non-relationship transgression. Coded categories included person crimes (20%), property crimes (16%), 4/16/07 Virginia Tech shooting transgression (9%), robbery (7%), 9/11/01 transgression (1%), and non-relationship hurt that was not a crime (e.g., rude behavior from a stranger; 46%). These categories were mutually exclusive, with 1% of the non-relationship transgressions not fitting into a coded category.

Since the non-relationship transgressions could have happened to the participant or to someone to whom they were close, the victim of the transgression was coded. For 41% of the transgressions, the participant was the victim; for 42% of the transgressions, a person close to the participant was the victim, and for 16% of the transgressions it was unclear who the victim was. Therefore, the non-relationship transgressions were split almost equally between having personally experienced the transgression and having had a loved one experience the transgression.

Most (48%) of the perpetrators of the non-relationship transgressions were still alive, with 11% dead, 23% unknown whether alive or dead, and 17% not applicable, as the transgressor

was a group or an institution. Again, there was more variance among responses for the non-relationship transgressions as compared to the relationship transgressions.

A little over a fourth of the transgressions happened about two years ago and 73% of the transgressions happened within the past two years. While more time had passed since the occurrence of the non-relationship transgressions compared to the relationship transgressions, these experiences were for the most part fairly recent occurrences. Additionally, the non-criminal non-relationship transgressions were more likely to be recent occurrences ($r = -.23, p < .01$). In contrast, more time was likely to have elapsed between the occurrences of reported person crimes ($r = .14, p < .05$).

In a similar fashion to the relationship transgressions, a meaningful difference was noted between the degree of hurt initially caused by the transgression and currently caused by the transgression. The degree of hurt significantly decreased over time ($t = 25.81, p < .01$). The amount of hurt initially caused by the transgressions ranged from 2 to 9 on a scale of 1 (*not at all*) to 9 (*completely*), with a mean of 6.19 (between *sort of hurt* and *a lot of hurt*, $\sigma^2 = 2.01$). Thirty percent of the transgressions caused a 7 (*a lot*) amount of hurt initially; 53% of the transgressions caused a 7 (*a lot*) amount of hurt or higher initially. Differences emerged based on the kind of non-relationship transgression. Those who experienced person crimes and the 4/16/07 shootings reported greater initial hurt ($r = .17, p < .01, r = .27, p < .01$, respectively) while non-criminal non-relationship transgressions were associated with less initial hurt ($r = -.26, p < .01$). The current hurt caused by these transgressions ranged from 1 to 9 on the same scale used above with a mean of 3.18 (*a little hurt*, $\sigma^2 = 2.20$). About 34% of the transgressions caused a 1 (*not at all*) amount of hurt at the time of assessment. Therefore, as a whole, the degree of hurt started between a *sort of hurt* and *a lot of hurt* and moved to *a little hurt*. Again,

differences emerged based on the kind of non-relationship transgression, with 4/16/07 victims reporting more current hurt ($r = .27, p < .01$) and non-criminal non-relationship victims reporting less current hurt ($r = -.12, p < .05$).

Responses to the General Measure of Forgiveness: The Core Measure

Descriptive statistics for the core 29 items of the initial GMF were evaluated for extreme skewness, kurtosis, and ceiling and floor effects. Tables 5 and 6 display the mean, standard deviation, corrected item-total correlation, skewness, and kurtosis statistics for all 29 items, for relationship and non-relationship forgiveness, respectively. Item #20, in reference to relationship forgiveness, was the only item above the cutoff of $< |2|$ for skewness, with a skewness statistic of -2.10. All other items had acceptable skewness ($> |2|$) and kurtosis ($> |7|$); therefore, the item distributions do not warrant concern for non-normality (Curran, West, & Finch, 1996). Additionally, none of the item means were less than 1.25, which would indicate a floor effect, or greater than 8.75, which would indicate a ceiling effect.

Factor Analysis

An exploratory factor analysis was conducted on the initial GMF items using principal axis factoring for the factor extraction method and a quartimax orthogonal rotation. Principal axis factoring was chosen because of its common use in exploratory factor analysis and for its advantage over principal component analysis for generalizability (Russell, 2002; Widaman, 1993). The use of a quartimax orthogonal rotation was based on the researcher's theory that forgiveness is an univariate construct and that the GMF would have one general factor. Because of the rotation chosen and the understanding that the GMF should have one general factor, simple structure among the factors was not expected, as each factor should not contain the same

number of items; however, simple structure was expected among the items, as items should clearly load onto only one factor (Thurstone, 1947).

Relationship Forgiveness. Analyses on the initial GMF for relationship forgiveness revealed that a factor analysis was appropriate, as indicated by a .92 on the Kaiser-Meyer-Olkin measure of sampling adequacy (compares the magnitudes of the observed correlation coefficients to the magnitudes of the partial correlation coefficients to see if there is much shared variance), and $\chi^2 = 5213.91$, $df = 406$, $p < .01$ on Bartlett's test of sphericity (measures whether intercorrelation matrix is an identity matrix, which would mean that variables are uncorrelated). Based on a scree test, three factors emerged (Cattell, 1966; see Figure 1). Despite the subjectivity of the scree test, in most instances its use accurately indicates the number of factors (Fabrigar, Wegener, MacCallum, & Strahan, 1999). Table 7 displays the eigenvalues and percent of variance explained for the largest three factors of the initial GMF prior to and after rotation. Note that prior to rotation, factor 1 accounted for 33.92% of the total variance of the initial GMF, with an eigenvalue of 9.84. After the quartimax rotation, factor 1 accounted for 27.25% of the total variance of the initial GMF.

The rotated factor matrix for relationship forgiveness showed 16 of the 29 items having a factor loading $< |.4|$ (Guadagnoli & Velicer, 1988). As expected, simple structure was not obtained among the factors, as each factor did not contain approximately the same number of items; however, simple structure was obtained among the items, as most items clearly loaded onto only one factor (Thurstone, 1947). Table 8 shows the rotated factor matrix for the initial GMF for relationship forgiveness. Factor 1 of the relationship analysis was labeled as *forgiveness*, as it included the most items and the self-report forgiveness item (i.e., #26) had the highest loading on this factor, .79. Factor 2 was labeled as *ruminantion and coping*, as it included

both of the rumination items (i.e., #7 and #10) and coping items (i.e., #11 and #20). Factor 3 was labeled as *revenge*, as it included both of the revenge items (i.e., #15 and #4).

Non-Relationship Forgiveness. Results from the factor analysis on the initial GMF for non-relationship forgiveness were similar. Again, a factor analysis was warranted (.91 on the Kaiser-Meyer-Olkin measure of sampling adequacy), with no violation of sphericity ($\chi^2 = 4606.40$, $df = 406$, $p < .01$ on Bartlett's test of sphericity). Based on a scree test, three factors emerged (see Figure 2). Table 9 displays the eigenvalues and percent of variance explained by each factor prior to and after rotation. Note that factor 1 accounted for 32.98% of the total variance of the initial GMF with an eigenvalue of 9.56 prior to rotation. After the quartimax rotation, factor 1 accounted for 29.03% of the total variance of the initial GMF.

The rotated factor matrix for non-relationship forgiveness included 19 of the 29 items with a factor loading $< |.4|$ (Guadagnoli & Velicer, 1988). Again, simple structure was not obtained among the factors, as each factor did not contain approximately the same number of items, but simple structure was obtained among the items, as most items clearly loaded onto only one factor (Thurstone, 1947). Table 10 shows the rotated factor matrix for the initial GMF for non-relationship forgiveness. Factor 1 was labeled as *forgiveness*, as it included the most items and the self-report forgiveness item (i.e., #26) had a high loading, .74. Factor 2 was labeled as *rumination and coping*, as it included both of the rumination items (i.e., #7 and #10) and coping items (i.e., #11 and #20). Factor 3 was labeled as *traumatic growth*, as it included both of the positive outcome, personal growth items (i.e., #17 and #9).

Items for Revised GMF. In order for the measure to meet its criteria as a general measure of forgiveness, only the items that loaded $< |.4|$ on the first factor, labeled *forgiveness*, for both the factor analysis on relationship and non-relationship forgiveness were included in the revised

measure. Disparities between the factor analyses on the initial GMF for relationship and non-relationship forgiveness included item #21 (To what extent do you understand why they did what they did?) loading onto factor 1 for relationship but not non-relationship forgiveness; and items #23 (To what extent do you feel anxious because of them?), #3 (To what extent do you feel sadness when you think about them?), #13 (To what extent are your muscles free of tension when you are reminded of what they did?), and #19 (To what extent do you feel freedom from them and what they did?) loading onto factor 1 for non-relationship but not relationship forgiveness. Additionally, none of these items were among the strongest loadings for either factor analysis. In sum, the revised GMF included 15 items, specifically original items #1, #4, #5, #6, #8, #12, #15, #16, #18, #22, #24, #25, #26, #28, and #29 (see Appendix H). Tables 11 and 12 display the correlations among the items for relationship forgiveness and non-relationship forgiveness, respectively. After recoding the negatively worded items, the revised GMF had a mean item response of 6.23, $\sigma^2 = 2.52$ for relationship forgiveness and a mean item response of 5.18, $\sigma^2 = 2.91$ for non-relationship forgiveness. At a broad level, participants reported more forgiveness for the perpetrators of their relationship transgressions than for their non-relationship transgressions ($t = 6.97, p < .01$).

Reliability Estimate of the Revised GMF

In order to evaluate *hypothesis one*, that the internal consistency of the GMF would be .80 or higher, Cronbach's alphas were calculated for both relationship and non-relationship forgiveness. Results indicated high internal consistency, with a Cronbach's alpha of .93 for each.

General Factor of Revised GMF

To evaluate ***hypothesis two***, that the items of the GMF would either cohere in a general factor or multiple factors that were highly correlated with each other, results from the factor analysis were evaluated as well as the correlations among items. As previously reported, a general factor emerged for both relationship and non-relationship forgiveness that accounted for a sizable percentage of the variance on the initial GMF (27.25% and 29.03% of the total variance after rotation, respectively). For relationship forgiveness, the items correlated between .17 to .82. For non-relationship forgiveness, the items correlated between .17 to .80. Therefore, hypothesis two was supported by the items cohering in a general factor. The revised 15-item GMF was used for the remainder of the analyses.

Convergent & Discriminant Validity Analyses

To test the convergent validity of the GMF for relationship forgiveness, the GMF sum score was compared to the EFI total sum score, i.e., ***hypothesis three*** was tested. Also, the GMF sum score for relationship forgiveness excluding the self-report forgiveness item (i.e., #26) was compared to the self-report forgiveness item, i.e., part of ***hypothesis four*** was tested. Correlations indicated strong, positive relationships, as predicted (GMF – EFI $r = .81, p < .01$; and GMF excluding self-report forgiveness item – self-report forgiveness (i.e., #26) $r = .78, p < .01$). Therefore, hypothesis three and hypothesis four that pertained to relationship forgiveness were supported.

To test the convergent validity of the GMF for non-relationship forgiveness (***hypothesis four***), the GMF sum score excluding the self-report forgiveness item was compared to the self-report forgiveness item (i.e., item #26). This correlation also indicated a strong, positive

relationship, as predicted ($r = .78, p < .01$). Therefore, hypothesis four that pertained to non-relationship forgiveness was supported (see Table 12 for convergent validity correlations).

To investigate the discriminant validity of the GMF, the sum score for both relationship and non-relationship forgiveness was compared to the M-C SDS (social desirability; *hypothesis five*), the STICSA (state cognitive and state somatic anxiety; *hypothesis six*), the BAAQ (anger and aggression; *hypothesis seven*), and the SCSORF (religiosity; *hypothesis eight*). Table 14 presents the correlations between the GMF and the discriminant validity measures and Figure 3 presents a graphical representation of the absolute averaged values of the correlations. For most of the comparisons, results were as predicted. Results for relationship forgiveness indicated that the GMF had a small to moderate positive relationship with social desirability, small to moderate inverse relationships with state cognitive and state somatic anxiety, and anger and aggression, and a small to moderate positive relationship with religiosity. Results for non-relationship forgiveness were similar, as the GMF had a small to moderate positive relationship with social desirability, small to moderate inverse relationships with state cognitive and state somatic anxiety, and anger and aggression, and a small to moderate positive relationship with religiosity. The only hypothesis not supported was the comparison with social desirability, which was expected to have the weakest correlation.

To test the pattern of correlations between the convergent and discriminant validity measures, which were proposed in *hypotheses three* through *eight* (specifically, that the convergent validity correlations would be strongest, the GMF and social desirability (M-C SDS) correlations would be weakest, and the other discriminant validity correlations would be between the convergent validity correlations and the M-C SDS in magnitude), the procedure suggested by Meng, Rosenthal, and Rubin (1992) for comparing correlated correlations was followed, with the

GMF considered the common dependent variable. First, the correlations among the convergent and discriminant validity measures were tested for heterogeneity in magnitude using absolute values of the correlations. This was the first step in determining whether the correlations differed in magnitude; results indicated differences in magnitude for both relationship transgressions ($\chi^2(6) = 351.75, p < .01$) and non-relationship transgressions ($\chi^2(5) = 204.15, p < .01$).

Next, the pattern among the correlations' magnitudes was tested by pair wise comparisons using absolute values and the GMF as the common dependent variable. This directly tested the hypotheses regarding the strength of the convergent and discriminant validity correlations; specifically that the convergent validity correlations would be the strongest, that there would be no difference among the discriminant validity correlations except that the social desirability (M-C SDS) correlation would be the weakest. Results indicated that the convergent validity correlations for relationship forgiveness (i.e., GMF – EFI and GMF – self-report forgiveness) were not statistically different from one another ($Z = 1.67, p > .05$). Next, the relationship among the discriminant measures that were hypothesized to have a moderate relationship with the revised GMF for relationship forgiveness were investigated; this included the BAAQ (anger and aggression), the SCSORF (religiosity), the state somatic anxiety portion of the STICSA, and the state cognitive anxiety portion of the STICSA. Results indicated that their correlations did not differ in magnitude from one another ($r_{GMF, BAAQ}$ compared to $r_{GMF, SCSORF} Z = .14$, $r_{GMF, BAAQ}$ compared to $r_{GMF, STICSA_Somatic} Z = 0$, $r_{GMF, BAAQ}$ compared to $r_{GMF, STICSA_Cognitive} Z = .18$, $r_{GMF, STICSA_Somatic}$ compared to $r_{GMF, SCSORF} Z = 1.69$, $r_{GMF, SCSORF}$ compared to $r_{GMF, STICSA_Cognitive} Z = 0$, $r_{GMF, STICSA_Somatic}$ compared to $r_{GMF, STICSA_Cognitive} Z = .21, p > .05$). Since the discriminant validity measures did not significantly differ from one another in magnitude, all

discriminant validity correlations did not need to be compared to the convergent validity correlations in order to test whether they differed from the convergent validity correlations for relationship forgiveness. Therefore, the correlation between the revised $GMF_{relationship}$ and self-reported item ($r = .78$), which was the smaller of the two convergent measure correlations, was compared to the $GMF_{relationship}$ and BAAQ correlation. Results indicated that the convergent validity correlations were statistically different from the discriminant validity correlations ($Z = 9.81, p < .01$).

Finally *hypothesis five*, that the correlation between the $GMF_{relationship}$ and social desirability (M-C SDS) would be the weakest among all tested correlations was examined. To test whether the $GMF_{relationship}$ and social desirability (M-C SDS) correlation was the weakest among the discriminant validity correlations, pair wise comparisons were made using the $GMF_{relationship}$ and social desirability (M-C SDS) correlation as the common comparison correlation. These analyses found no statistical differences ($r_{GMF, M-C SDS}$ compared to the discriminant validity correlations: $r_{GMF, BAAQ} Z = 1.37, r_{GMF, SCSORF} Z = 1.01, r_{GMF, STICSA_Somatic} Z = .93, r_{GMF, STICSA_Cognitive} Z = 1.07, p > .05$). Therefore, *hypothesis five* that the correlation between the $GMF_{relationship}$ and social desirability (M-C SDS) would be the weakest correlation was not supported; however, all other hypotheses about the pattern of correlations were supported.

The same procedure for comparing the convergent and discriminant validity correlations for relationship transgressions was used for non-relationship transgressions, revealing a similar pattern. The hypothesized moderate magnitude discriminant validity correlations for non-relationship forgiveness did not differ significantly in magnitude ($r_{GMF, BAAQ}$ compared to $r_{GMF, SCSORF} Z = 1.16, r_{GMF, BAAQ}$ compared to $r_{GMF, STICSA_Somatic} Z = 1.25, r_{GMF, BAAQ}$ compared to $r_{GMF,$

STICSA_Cognitive $Z = .66$, $r_{\text{GMF, STICSA_Somatic}}$ compared to $r_{\text{GMF, SCSORF}} Z = .12$, $r_{\text{GMF, STICSA_Cognitive}}$ compared to $r_{\text{GMF, SCSORF}} Z = .61$, $r_{\text{GMF, STICSA_Cognitive}}$ compared to $r_{\text{GMF, STICSA_Somatic}} Z = .79$, $p > .05$). Since these correlations did not differ in magnitude, all discriminant validity correlations did not need to be compared to the $\text{GMF}_{\text{non-relationship}}$ and social desirability (M-C SDS) correlation. Therefore, the correlation between $\text{GMF}_{\text{non-relationship}}$ and social desirability (M-C SDS) was compared to the correlation between the $\text{GMF}_{\text{non-relationship}}$ and anger and aggression (BAAQ) in order to test whether the M-C SDS correlation was weaker. Results indicated that, like the relationship forgiveness correlations, the correlation between the $\text{GMF}_{\text{non-relationship}}$ and social desirability (M-C SDS) did not differ from the other discriminant validity correlations ($Z = .47$, $p > .05$).

Lastly, the convergent validity correlation for non-relationship forgiveness (i.e., $\text{GMF}_{\text{non-relationship}}$ without item #26 and the self-report forgiveness item (i.e., #26)) was compared to the discriminant validity correlations. Again, since the discriminant validity correlations did not differ in magnitude, it was not necessary to compare all correlations. Therefore, the correlation between $\text{GMF}_{\text{non-relationship}}$ without item #26 and the self-report forgiveness item (i.e., #26) was compared to the $\text{GMF}_{\text{non-relationship}}$ and anger and aggression (BAAQ) correlation. The convergent validity correlation was significantly stronger than the discriminant validity correlations ($Z = 9.89$, $p < .01$). Similar to the relationship forgiveness comparisons, the non-relationship forgiveness comparisons indicated that the convergent validity correlation was the strongest but that none of the other discriminant validity correlations differed. This did not support hypothesis five that social desirability (M-C SDS) would have the weakest relationship to non-relationship forgiveness. Table 15 clearly illustrates the pattern of correlations found for both relationship and non-relationship forgiveness.

Exploratory Analyses

At an exploratory level, responses to the GMF motivation section were analyzed. The majority of participants responded to items that assessed their motivation to forgive, 89% of relationship participants and 66% of non-relationship participants indicated that they felt they should forgive. For both relationship and non-relationship forgiveness, the most endorsed reasons for forgiving included wanting or feeling that the past should be put behind them (95% endorsed for relationship and 90% endorsed for non-relationship) and that it was an opportunity for self-improvement and self-growth (93% endorsed for relationship and 83% for non-relationship). For participants who responded to reasons why they were not forgiving, the most endorsed responses differed depending on the kind of transgression. For relationship transgressions, the most endorsed reasons for not forgiving included that the transgressor did not deserve it (95% endorsed) and that a sense of trust was lost in the transgressor (92% endorsed). For non-relationship transgressions, the most endorsed reasons for not forgiving included that the transgressor did not deserve it (93% endorsed), that the participant was fine without forgiving the transgressor (93%), and that the participant was too angry at the transgressor (82%).

Exploratory analyses were also conducted using gender as the grouping variable. Gender analyses were especially important because of the greater ratio of females to males that participated. Had meaningful differences emerged between genders, the integrity and external validity of the study would be questionable. Therefore, it was necessary to identify areas where the results may have been skewed based primarily on differences that were unique to the sample. A number of variables were investigated, specifically degree of hurt, both initially and currently, the nature of the reported transgressions, thoughts and feelings toward the transgressor, summed GMF score, and motivations to (not) forgive. As will be presented, results did not indicate

meaningful differences between genders and concern is not warranted that the sample was skewed because of the predominantly female sample.

First, the degree of hurt caused by the transgression was investigated. Results indicated that males and females did not differ significantly in the amount of hurt initially caused by the relationship transgressions ($t = -.79, p > .05$), nor did their initial hurt differ for non-relationship transgressions ($t = -1.24, p > .05$). This was also true for the current amount of hurt caused by the relationship transgressions ($t = -1.24, p > .05$) and non-relationship transgressions ($t = -.79, p > .05$). Next, differences were examined for the kinds of transgressions reported. There were no significant gender differences between the kinds of relationship transgressions reported (physical hurt transgressions $t = -1.02, p > .05$; gossip transgressions $t = -.83, p > .05$; cheating transgressions $t = -.82, p > .05$; lied to $t = -1.42, p > .05$; spoken face-to-face transgressions $t = 1.24, p > .05$). This was also true for the kinds of non-relationship transgressions reported (personal injury crime $t = -.34, p > .05$; property crime $t = .33, p > .05$; robbery $t = .39, p > .05$; 9/11 $t = .61, p > .05$; 4/16 $t = -.05, p > .05$; non-relationship hurt but not a crime $t = -.47, p > .05$). Therefore, males and females reported similar degrees of hurt caused by their transgressions and reported similar kinds of transgressions, both in reference to relationship and non-relationship transgressions.

The thoughts and feelings that participants reported toward the transgressor at the time of the study were also analyzed using gender as the grouping variable. Here, several differences emerged. In reference to relationship transgressions, males reported more indifferent thoughts and feelings toward the transgressor than females ($t = 2.55, p < .05$), and females reported more internalizing thoughts and feelings, characterized as feeling guilt, shame, sadness, and/or anxiety ($t = -2.71, p < .05$) and more externalizing thoughts and feelings, characterized as feeling angry,

hatred, wanting to hurt the person, and/or get revenge ($t = -3.91, p < .05$). In reference to non-relationship transgressions, the only significant difference was that females reported more internalizing thoughts and feelings toward the transgressor ($t = -2.53, p < .05$). These differences may reflect meaningful disparities in how males and females cope with hurts and what is socially acceptable to report. However, there was not a difference in the GMF summed score between males and females for relationship forgiveness ($t = .82, p > .05$) and for non-relationship forgiveness ($t = -1.60, p > .05$), suggesting that forgiveness was not influenced by gender.

The motivation section of the GMF was investigated next for gender differences; several differences emerged. In reference to relationship transgressions, males more than females indicated thinking about forgiving because they felt pressured to do so by people other than their family/friends ($t = 2.66, p < .01$). In terms of non-relationship transgression, males indicated more than females that they were not forgiving because they wanted to get revenge ($t = 2.05, p < .05$) and females more than males indicated that they were not forgiving because they were too sad ($t = -2.56, p < .05$). None of the other motivation items signified statistical differences based on gender. The differences that emerged on the motivation section may pair with the thoughts and feelings reported, with differences linked to coping styles and socially acceptable gender behavior. Again, while differences existed for the thoughts and feelings toward the transgressor and motivational reasons for (not) forgiving, these differences did not affect the forgiveness scores on the GMF.

Another set of exploratory analyses involved whether or not the participant was the victim of the non-relationship transgression and how this difference may have influenced outcomes. From analyzable reports, there was almost an even split between the participant as the victim (41%) and a person close to the participant as the victim (42%). Differences did exist.

When participants reported on a non-relationship transgression that happened to a person close to them, they reported more initial hurt and more current hurt than did participants who reported on a non-relationship transgression that happened to them personally ($t = -3.03, p < .05$ for initial hurt and $t = -2.77, p < .05$ for current hurt). This difference carried over to the summed GMF score, with participants who personally experienced the hurt having more forgiveness for the transgressor than participants who reported on a person close to them as the victim ($t = 2.86, p < .01$). Perhaps qualifying these results is the relationship between the victim and the kind of non-relationship transgression reported, with personally experienced non-relationship transgression having a higher likelihood of being a non-criminal non-relationship transgression and non-personally experienced reports having a higher likelihood of being a criminal non-relationship transgression.

Motivations for (not) forgiving were also different. For those who felt they should forgive, participants who used a non-relationship transgression that happened to them personally endorsed the reasons that they felt pressured to do so by family/friends ($t = 2.17, p < .05$) and that they should give an unselfish gift of forgiveness to the transgressor ($t = 2.31, p < .05$), more than participants who reported on a transgression that happened to a person close to them. For those who answered questions related to not forgiving, participants who reported on a non-relationship transgression that happened to them personally endorsed that they wanted to get revenge more than participants who reported on a transgression that happened to a person close to them ($t = 2.06, p < .05$). So while results indicated a stronger relationship between personally experiencing a non-relationship transgression and forgiving the transgressor, those who felt they should not forgive wanted revenge on the transgressor, more than those who felt they should not forgive but did not personally experience the transgression.

Other exploratory analyses investigated the differences between those who reported on a criminal non-relationship transgression (53% of the sample) and those who reported on a non-criminal non-relationship transgression (46% of the sample). Those who reported on a criminal non-relationship transgression had less forgiveness for their transgressor than those who reported on a non-criminal transgression ($t = 7.04, p < .01$). However, this difference was less evident when asked if they felt they should forgive their transgressor; 72% of participants who reported a non-criminal transgression felt that they should forgive and 66% of participants who reported on a criminal transgression felt that they should forgive.

A final set of exploratory analyses assessed the open-ended coding results, i.e., how the kind of transgression reported and the thoughts and feelings toward the transgressor related to forgiveness. For relationship transgressions, physically hurt transgressions and gossiped about transgressions were related to less forgiveness ($r = -.18, p < .01, r = -.12, p < .05$, respectively), as measured by the summed GMF score. As reported earlier, physically hurt victims experienced more hurt currently. In general, there was a pattern between current hurt experienced and degree of forgiveness, the greater the hurt the less forgiveness ($r = -.45, p < .01$).

The association between current hurt and degree of forgiveness toward the transgressor was also true for non-relationship forgiveness ($r = -.45, p < .01$). As reported earlier, 4/16/07 victims experienced more current hurt while non-criminal non-relationship victims experienced less current hurt. When considering their degree of forgiveness, 4/16/07 victims has less forgiveness ($r = -.22, p < .01$) and non-criminal non-relationship victims had more forgiveness ($r = .39, p < .01$), highlighting this relationship. Another non-relationship transgression category that differed in degree of forgiveness was person crime transgressions. As reported previously,

those who experienced person crimes had more hurt initially. In terms of degree of forgiveness, person crime victims had less forgiveness ($r = -.20, p < .01$). The inverse relationship between initial hurt and forgiveness was significant for both relationship and non-relationship transgressions ($r = -.43, p < .01$; $r = -.27, p < .01$, respectively).

The other set of open-ended responses that were investigated were the thoughts and feelings toward the transgressor. The categories used to code these responses were identical for relationship and non-relationship transgressions. Several patterns emerged. Externalizing thoughts and feelings, such as anger and aggression, were related to less forgiveness for both relationship and non-relationship forgiveness ($r = -.45, p < .01$; $r = -.48, p < .01$, respectively), while internalizing thoughts and feelings were not related to forgiveness in a meaningful way ($r = -.045, p > .05$, $r = .052, p > .05$, respectively). Indifferent thoughts and feelings toward the transgressor were associated with more forgiveness for both relationship and non-relationship forgiveness ($r = .16, p < .01$; $r = .20, p < .01$, respectively). Interestingly for relationship forgiveness, externalizing thoughts and feelings were associated with more initial and current hurt ($r = .14, p < .05$, $r = .27, p < .01$, respectively) and indifferent thoughts and feelings were associated with less initial and current hurt ($r = -.16, p < .05$; $r = -.25, p < .01$, respectively). This pattern is consistent with the relationship between degree of hurt and forgiveness examined earlier. A final category explored was whether the participant reported forgiving the transgressor in the open-ended thoughts and feelings section. Twenty individuals were coded for this category in the relationship transgressions and four in the non-relationship transgressions. For relationship transgressions, individuals who spontaneously reported forgiving their transgressor did indeed have a greater degree of forgiveness as assessed by the GMF ($r = .28, p < .01$). The small number for non-relationship forgiveness does not warrant an analysis.

Discussion

The main goal of this study was to create a broadly applicable, psychometrically sound measure of general forgiveness. Initial results presented here are encouraging. In the current study, using exploratory factor analysis a general forgiveness factor emerged from the initial GMF for both relationship and non-relationship forgiveness. From the initial 29 core items, 15 items were retained to form the revised GMF. These 15 items sample cognitions, affect, behaviors, and motivations that contribute to a sum score that measures the degree of forgiveness toward a transgressor. The term *transgressor* is used broadly for the GMF, as the measure is appropriate for a specific person, group of people, or institution (e.g., the government, a business). Results indicated a high degree of internal consistency for the GMF for both relationship and non-relationship forgiveness, though some caution exists because the same sample was used to calculate the Cronbach's alphas as was used to revise the GMF. However, the initial GMF also had high internal consistency, .92 - .91, so it is likely that the revised GMF will maintain a high level of internal consistency in future samples.

The validity analyses of the GMF support the claim that the measure is assessing the construct of forgiveness, through a strong positive correlation with the EFI for relationship transgressions and through strong positive correlations with a self-report forgiveness item for relationship and non-relationship forgiveness. Additionally, individuals who reported that they had forgiven their relationship transgressor in the open-ended thoughts and feelings section had a greater degree of forgiveness than those who did not report forgiving their transgressor. Also, some of the open-ended analyses provide evidence for the inclusion of items, such as externalized thoughts and feelings, which tap into anger and aggression, having a strong inverse relationship to forgiveness. Further, the GMF was precise enough to discriminate among

constructs that are empirically related to forgiveness but distinct, specifically anger and aggression, state cognitive anxiety, state somatic anxiety, and religiosity. The relationships between the GMF and these discriminant validity constructs were in the predicted direction and strength, specifically moderate. Although it was hypothesized that the GMF and social desirability would have the weakest relationship among the constructs, this was not the case. This relationship was just as strong as the relationships between the GMF and other discriminant validity constructs (e.g., state somatic anxiety). While some studies have reported that social desirability is not a concern regarding their measure (e.g., EFI in Subkoviak et al., 1995), other studies note a relationship between forgiveness and social desirability and caution that social desirability may need to be considered in interpreting the results (e.g., TRIM in McCullough et al., 1998 and the Forgiveness Likelihood Scale in Rye et al., 2001). While indicating a relationship between the GMF and social desirability, it is worth noting that in the current study the relationship was small, $r = .18$ for relationship forgiveness and $r = .20$ for non-relationship forgiveness. It is also worth noting that a similar small but significant relationship was found between the EFI and social desirability (M-C SDS; $r = .16, p < .01$). Additionally, the power for finding a statistically significant relationship between social desirability and forgiveness was high, for $r_{\text{GMF}_{\text{relationship}}, \text{M-C SDS}} \beta = .97$ for $r_{\text{GMF}_{\text{nonrelationship}}, \text{M-C SDS}} \beta = .96$ (Erdfelder, Faul, & Buchner, 1996).

Evidence also supported the GMF as a state measure of forgiveness, as opposed to a trait measure. This was evidenced by the lack of a relationship between relationship forgiveness scores and non-relationship scores (e.g., $r_{\text{GMF}_{\text{relationship}}/\text{GMF}_{\text{nonrelationship}}} = .10, p > .05$, $r_{\text{EFI}_{\text{nonrelationship}}} = .07, p > .05$; see table 13). The presence of a relationship between the two kinds of relationship forgiveness would have suggested that a person who forgives a relationship

transgression would also forgive a non-relationship transgression, and vice-a-versa. However, this was not true for the study and suggests that specific circumstances, perhaps degree of hurt, kind of transgression, etc., influence degree of forgiveness as assessed by the GMF, not a general disposition.

A related set of analyses attempted to assess whether there was a relationship between forgiveness and time since the transgression. It makes sense that the scores on the GMF would vary as a function of how long ago the transgression occurred, with transgressions that happened more recently having less forgiveness. However, this relationship was not supported for relationship forgiveness ($r_{\text{GMF_relationship/Time}} = -.01, p > .05$) and was in the opposite direction for non-relationship forgiveness ($r_{\text{GMF_nonrelationship/Time}} = -.147, p < .05$). The cross-sectional nature of the current study limits conclusions that might be drawn about forgiveness over time. Because reported degree of hurt, a correlate of forgiveness, is different for initial versus current, it is likely that forgiveness changes too. However, meaningful investigation into the GMF as a process measure will require further research.

Based on the initial psychometric results of the GMF, there are several implications for its use in researching forgiveness. Foremost, the GMF is broadly applicable and can be used to measure forgiveness in a variety of circumstances. It can be used to assess specific transgressions that were perpetrated by someone the victim had a relationship with (e.g., marriage, family members), transgressions that were perpetrated by someone the victim did not have a relationship with (e.g., crime committed by a stranger, hurt caused by a stranger), and transgressions caused by a group of people (e.g., a regime) or an institution (e.g., the Church). Having a general measure of forgiveness may facilitate better comparisons across studies, because results will be more directly comparable. The GMF also provides a theoretically based,

psychometrically strong measure of non-relationship forgiveness, for which currently a standard measure does not exist. The lack of an appropriate measure may be the reason for the relative deficit of research on non-relationship forgiveness, which clearly is important, especially in criminal justice domains. The GMF opens the door to discovering potential differences that exist between relationship and non-relationship forgiveness, including the process, the degree of hurt, the effects of not forgiving, the outcomes for forgiving, and more. The relevance of non-relationship forgiveness extends beyond the therapy office and justice system onto the battle fields of war-torn countries around the world.

Other advantages for using the GMF, over extant forgiveness measures, include its brevity, non-proprietary status, and *core* components. After revisions of the GMF, based on item analyses and factor analyses, a sampling of the core components remained a part of the measure: affective, cognitive, behavioral, and motivational. Since some of the items that represented each of the components were retained, this suggests that the identified components are the basis of forgiveness. Again, the open-ended analyses also supported item retention of anger and aggression items. Because a sampling of core components was retained in the revised GMF, it supports the idea that forgiveness is a complex and dynamic makeup of **these** core components. As such, the use of certain components (e.g., affective items) from the GMF to inform forgiveness is cautioned against. The GMF summed core section should be used in its entirety, giving all 15 items. Shortening the measure will severely limit its psychometric quality, both its validity based on the definition of forgiveness and statistically as the reliability will decrease with fewer items.

The four orienting questions, 15 summed items, and an optional 12 question motivation section assesses a variety of cognitions, affect, behaviors, and motivations that inform where a

person is in the process of forgiving. Though not enough research on the GMF exists to support whether the measure is sensitive enough to track changes in forgiveness, it was created in part with this idea in mind and the nine-point Likert scale allows for specificity in responses. Additionally, the study did not find evidence of ceiling or floor effects for any of the summed items, which allows for the detection of change. The definition of forgiveness that underlies the GMF identifies forgiveness as a process. Therefore, assessment of forgiveness at one point in time, as was done for this study, may be misleading. This harkens back to the idea of trend forgiveness and the importance of an averaged degree of forgiveness (McCullough et al., 2003). An individual may have more or less forgiveness at a specific point in time as their thoughts, feelings, behaviors, and motivations toward the transgressor fluctuate. However, just because the GMF was based on a process understanding of forgiveness, it does not limit its use solely to tracking forgiveness over time; it can assess forgiveness at a specific point. Although some caution exists about an individual's trend forgiveness in assessing only at one time, it is likely that scores will be relatively representative of the true degree of forgiveness. For example, a person low on forgiveness yesterday is likely to be relatively low on forgiveness today.

Related to trend forgiveness, the GMF may be particularly suitable for investigating the variance of forgiveness within individuals over time. Empirical questions as to whether there is a qualitative difference between those who experience steady increases in degree of forgiveness and those who experience wide fluctuations in degree of forgiveness could be evaluated. Information on an individual's forgiveness over time may predict outcomes and inform interventions. Since the GMF is brief, multiple assessments over time would not be burdensome; however, unlike the TRIM, the GMF would inform degree of forgiveness across a wider sampling of items (i.e., cognitive, behavioral, affective, and motivational).

Beyond the already cited implications of the GMF for research and application, this study found support for the quality of the GMF over and above that of the EFI, in terms of capturing anxiety related to forgiveness. The GMF was more inversely correlated with state somatic anxiety than was the EFI ($r_{\text{GMF, STICSA_Somatic}} = -.26$, $r_{\text{EFI, STICSA_Somatic}} = -.08$, $Z = 5.56$, $p < .01$). The GMF was also more correlated with state cognitive anxiety than was the EFI ($r_{\text{GMF, STICSA_Cognitive}} = -.25$, $r_{\text{EFI, STICSA_Cognitive}} = -.12$, $Z = 4.10$, $p < .01$). Past studies on forgiveness have found a meaningful relationship with anxiety (e.g., Witvliet et al., 2004) and as such a measure of forgiveness should relate to anxiety. Using a forgiveness measure that does not relate to anxiety may misrepresent forgiveness scores, especially for individuals who tend to express distress through anxiety symptoms.

The use of the GMF in therapy and research settings warrants caution for now because of the newness of the measure and the need for further investigation into its psychometric quality. Norms and meaningful cut-offs do not exist yet. Despite the need for more research on the GMF, it is certainly an improvement over using a single question assessment (e.g., have you forgiven X?). As presented in the introduction, the construct of forgiveness is a complex set of specific variables that when combined in a meaningful way inform the degree of forgiveness. Using a single item limits the variability among individuals and within individuals, as specific aspects of forgiveness are absent. Further, the truncated reliability and validity of a single item assessment of forgiveness hinders accurate conclusions.

The current study has other limitations. Most striking may be the sample of 343 college students from an introductory psychology pool. While this sample is not representative of the larger U.S. adult population, it does provide some meaningful insight into the GMF and its quality as a measure. Moreover, several psychometric studies of previous forgiveness measures

have also used college samples (e.g., Brown, Gorsuch, Rosik, & Ridley, 2001; McCullough et al., 1998; Rye et al., 2001; Subkoviak et al., 1995; Wade, 2001). Because the revised GMF was based on a young ($\mu = 19.2$), predominantly white (85% identified Caucasian) sample, it is important to recognize the culture limitations of this study. Arguments concerning a lack of experience with real-world hurts, naiveté, and qualitatively different lifestyles surround the study's sample. However, analyses of transgressions revealed severe hurts, with 53% of the reported non-relationship transgressions being crimes. Further, of these crimes 70% were violent person-injury crimes. The transgressions also were not slight, as evidenced by the degree of initial hurt caused by relationship transgression, average hurt was *much hurt*, and between *sort of hurt* and *a lot of hurt* for non-relationship transgressions.

Another concern with the sample was the predominantly female participation (74%). However, analyses indicated that different outcomes based on gender were limited. The amount of hurt initially caused by the transgressions and amount of hurt currently experienced by the transgressions did not differ by gender, nor did the types of transgressions reported. Differences that did emerge, such as males endorsing more of a desire to get revenge on the transgressor and reporting more indifferent thoughts and feelings toward the transgressor while females endorsed more internalizing thoughts and feelings, are consistent with gender research (Mendelson, Kubzansky, Datta, & Buka, 2008; Vigil, 2008). Furthermore, females more than males reported more externalizing thoughts and feelings toward the transgressor when the format was open-ended, which suggests that they too experienced and expressed similar outcomes. The fact that females endorsed more internalized thoughts and feelings, such as sadness, guilt, and anxiety, may have impacted the factor analysis. However, several questions on the GMF assessing anger and revenge significantly contributed to the forgiveness factor (i.e., To what extent do you want

to make them pay for what they did? To what extent are you angry at them? To what extent do you want to get revenge on them? To what extent do you hate them?). Finally, there were no differences in the GMF summed scores for males and females on relationship and non-relationship forgiveness.

In reference to the factor analyses conducted on the GMF for relationship and non-relationship forgiveness, the selection of items for the revised GMF may not generalize to the broader adult population because of artifacts with the sample. This is entirely possible and once again calls for further research with the revised GMF using broader populations, or even replications using college samples.

Further investigation into the psychometric quality of the GMF is needed to strengthen the results found in this study and to generalize the results to other populations. Suggested future studies include comparing the GMF to the TRIM, more exploratory factor analytic investigations, and a confirmatory factor analysis. None the less, the idea that a general measure of forgiveness is feasible opens the door to new research in forgiveness and for its application. Specific strengths of the GMF include its theoretical grounding, brevity, broad applicability, free use, and, initially at least, its psychometrically quality. Use of the GMF in research and application may provide opportunities for significant gains to be made in the field of forgiveness.

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Appendix A

General Measure of Forgiveness

The following questions ask you to think about a specific time when you were hurt, either by something that happened or something that failed to happen. You may have been hurt by a person, a group of people, or an institution (such as a government or a company).

Try to remember what happened during this specific event.

1. Who hurt you? (Please place a \checkmark next to the appropriate description. *Check all that apply*)

a. Male Female Does not apply (e.g., a group or an institution)

b. Family member(s): Friend(s)
 Immediate family member
 Extended family member
 Classmate(s) Co-worker(s)
 Acquaintance(s) Stranger(s)
 Other (please specify): _____

c. **Are they alive?**
 Yes No Unknown
 Does not apply (e.g., a group or an institution)

2. How long ago did this incident occur? (Please place a \checkmark next to the most appropriate description.)

within the past week within the past month within the past 6 months
 within the last year within 2 years ago within 5 years ago
 longer than 5 years ago

3. When this incident occurred how deeply were you hurt? (Please circle a number below.)

1 2 3 4 5 6 7 8 9
 >-----<
 Not at all A little Sort of A lot Completely

4. Currently, how deeply are you hurting because of this incident? (Please circle a number below.)

1	2	3	4	5	6	7	8	9
>-----<								
Not at all		A little		Sort of		A lot		Completely

The following set of questions asks about your current feelings regarding this person, group of people, or institution that hurt you. Your answers are confidential.

1. To what extent do you avoid things that have to do with them? (Please circle a number below.)

1	2	3	4	5	6	7	8	9
>-----<								
Not at all		A little		Sort of		A lot		Completely

2. To what extent do you feel like they have control over your life? (Please circle a number below.)

1	2	3	4	5	6	7	8	9
>-----<								
Not at all		A little		Sort of		A lot		Completely

3. To what extent do you feel sadness when you think about them? (Please circle a number below.)

1	2	3	4	5	6	7	8	9
>-----<								
Not at all		A little		Sort of		A lot		Completely

4. To what extent do you want to make them pay for what they did? (Please circle a number below.)

1	2	3	4	5	6	7	8	9
>-----<								
Not at all		A little		Sort of		A lot		Completely

5. To what extent are you angry at them? (Please circle a number below.)

1	2	3	4	5	6	7	8	9
>-----<								
Not at all		A little		Sort of		A lot		Completely

6. To what extent is your body relaxed when you say their name repeatedly in your head? (Please circle a number below.)

1	2	3	4	5	6	7	8	9
>-----<								
Not at all		A little		Sort of		A lot		Completely

7. To what extent are you able to go through an entire day without thinking about them? (Please circle a number below.)

1	2	3	4	5	6	7	8	9
>-----<								
Not at all		A little		Sort of		A lot		Completely

8. To what extent do you have negative emotions about them? (Please circle a number below.)

1	2	3	4	5	6	7	8	9
>-----<								
Not at all		A little		Sort of		A lot		Completely

9. To what extent do you think good has come from what they did? (Please circle a number below.)

1	2	3	4	5	6	7	8	9
>-----<								
Not at all		A little		Sort of		A lot		Completely

10. To what extent do you dwell on or constantly think about what they did? (Please circle a number below.)

1	2	3	4	5	6	7	8	9
>-----<								
Not at all		A little		Sort of		A lot		Completely

11. To what extent are you acting like yourself, the way you were before the incident occurred?
(Please circle a number below.)

1	2	3	4	5	6	7	8	9
>-----<								
Not at all		A little		Sort of		A lot		Completely

12. To what extent do you have negative thoughts about them? (Please circle a number below.)

1	2	3	4	5	6	7	8	9
>-----<								
Not at all		A little		Sort of		A lot		Completely

13. To what extent are your muscles free of tension when you are reminded of what they did?
(Please circle a number below.)

1	2	3	4	5	6	7	8	9
>-----<								
Not at all		A little		Sort of		A lot		Completely

14. To what extent do you tell yourself to forget about what they did? (Please circle a number below.)

1	2	3	4	5	6	7	8	9
>-----<								
Not at all		A little		Sort of		A lot		Completely

15. To what extent do you want to get revenge on them? (Please circle a number below.)

1	2	3	4	5	6	7	8	9
>-----<								
Not at all		A little		Sort of		A lot		Completely

16. To what extent have you told other people that you have forgiven them? (Please circle a number below.)

1	2	3	4	5	6	7	8	9
>-----<								
Not at all		A little		Sort of		A lot		Completely

17. To what extent do you find yourself growing or learning from what they did? (Please circle a number below.)

1	2	3	4	5	6	7	8	9
>-----<								
Not at all		A little		Sort of		A lot		Completely

18. To what extent do you feel at ease when you think about them? (Please circle a number below.)

1	2	3	4	5	6	7	8	9
>-----<								
Not at all		A little		Sort of		A lot		Completely

19. To what extent do you feel freedom from them and what they did? (Please circle a number below.)

1	2	3	4	5	6	7	8	9
>-----<								
Not at all		A little		Sort of		A lot		Completely

20. To what extent are you able to perform your daily tasks at the same level that you did before the incident occurred? (Please circle a number below.)

1	2	3	4	5	6	7	8	9
>-----<								
Not at all		A little		Sort of		A lot		Completely

21. To what extent do you understand why they did what they did? (Please circle a number below.)

1	2	3	4	5	6	7	8	9
>-----<								
Not at all		A little		Sort of		A lot		Completely

22. To what extent do you like to imagine that they never existed? (Please circle a number below.)

1	2	3	4	5	6	7	8	9
>-----<								
Not at all		A little		Sort of		A lot		Completely

23. To what extent do you feel anxious because of them? (Please circle a number below.)

1	2	3	4	5	6	7	8	9
>-----<								
Not at all		A little		Sort of		A lot		Completely

24. To what extent do you feel peaceful when you think about them? (Please circle a number below.)

1	2	3	4	5	6	7	8	9
>-----<								
Not at all		A little		Sort of		A lot		Completely

25. To what extent do you hate them? (Please circle a number below.)

1	2	3	4	5	6	7	8	9
>-----<								
Not at all		A little		Sort of		A lot		Completely

26. To what extent have you forgiven them for what they did? (Please circle a number below.)

1	2	3	4	5	6	7	8	9
>-----<								
Not at all		A little		Sort of		A lot		Completely

27. To what extent are you unsure or conflicted about whether to forgive them? (Please circle a number below.)

1	2	3	4	5	6	7	8	9
>-----<								
Not at all		A little		Sort of		A lot		Completely

28. To what extent do you *want* to forgive them for what they did? (Please circle a number below.)

1	2	3	4	5	6	7	8	9
>-----<								
Not at all		A little		Sort of		A lot		Completely

29. To what extent do you feel you *should* forgive them for what they did? (Please circle a number below.)

1	2	3	4	5	6	7	8	9
-----><-----								
Not at all	A little		Sort of		A lot		Completely	

IMPORTANT:

If you circled a 2 or higher (higher than *Not at all*) on *either* question #28 or #29, please skip to section A.

If you circled *Not at all* on *both* question #19 and #20, please skip to section B.

Section A

Listed below are reasons why people forgive. Please answer the following questions in terms of their **importance** or **influence** on you for forgiving this person, group, or institution.

a. (I am thinking about forgiving / I have forgiven) because of my moral or religious beliefs.

1	2	3	4	5	6	7	8	9
>-----<								
Not at all		A little		Sort of		A lot		Completely

b. (I am thinking about forgiving / I have forgiven) because I want/should be free from the control they have on me.

1	2	3	4	5	6	7	8	9
>-----<								
Not at all		A little		Sort of		A lot		Completely

c. (I am thinking about forgiving / I have forgiven) because I want or feel I should improve my mental/physical well-being.

1	2	3	4	5	6	7	8	9
>-----<								
Not at all		A little		Sort of		A lot		Completely

d. (I am thinking about forgiving / I have forgiven) because I feel pressured to do so by my family/friends.

1	2	3	4	5	6	7	8	9
>-----<								
Not at all		A little		Sort of		A lot		Completely

e. (I am thinking about forgiving / I have forgiven) because I feel pressured to do so by people other than my family/friends.

1	2	3	4	5	6	7	8	9
>-----<								
Not at all		A little		Sort of		A lot		Completely

Section A

f. (I am thinking about forgiving / I have forgiven) because this is an opportunity for self-improvement and self-growth.

1	2	3	4	5	6	7	8	9
>-----<								
Not at all		A little		Sort of		A lot		Completely

g. (I am thinking about forgiving / I have forgiven) because I want or feel I should give an unselfish gift of forgiveness to them.

1	2	3	4	5	6	7	8	9
>-----<								
Not at all		A little		Sort of		A lot		Completely

h. (I am thinking about forgiving / I have forgiven) because I want or feel I should put the past behind me.

1	2	3	4	5	6	7	8	9
>-----<								
Not at all		A little		Sort of		A lot		Completely

i. (I am thinking about forgiving / I have forgiven) because I think everyone deserves a second chance.

1	2	3	4	5	6	7	8	9
>-----<								
Not at all		A little		Sort of		A lot		Completely

j. (I am thinking about forgiving / I have forgiven) because I want to have a relationship (romantic or non-romantic) with them.

1	2	3	4	5	6	7	8	9
>-----<								
Not at all		A little		Sort of		A lot		Completely

Section A

There may be another reason why you are thinking about forgiving or have forgiven. If so please explain the reason and rate its importance or influence on you.

k. (I am thinking about forgiving / I have forgiven) because:

1	2	3	4	5	6	7	8	9
>-----<								
Not at all	A little		Sort of			A lot		Completely

l. (I am thinking about forgiving / I have forgiven) because:

1	2	3	4	5	6	7	8	9
>-----<								
Not at all	A little		Sort of			A lot		Completely

You are now finished. Please stop.

Section B

Listed below are reasons why people do not forgive. Please answer the following questions in terms of their **importance** or **influence** on you for not forgiving this person, group, or institution.

a. I am not forgiving because the hurt was too severe.

1	2	3	4	5	6	7	8	9
-----<								
Not at all	A little		Sort of			A lot		Completely

b. I am not forgiving because I am too angry at them.

1	2	3	4	5	6	7	8	9
-----<								
Not at all	A little		Sort of			A lot		Completely

c. I am not forgiving because not enough time has passed since the incident.

1	2	3	4	5	6	7	8	9
-----<								
Not at all	A little		Sort of			A lot		Completely

d. I am not forgiving because I lost my sense of trust in them.

1	2	3	4	5	6	7	8	9
-----<								
Not at all	A little		Sort of			A lot		Completely

e. I am not forgiving because to do so would put me at risk of being hurt again.

1	2	3	4	5	6	7	8	9
-----<								
Not at all	A little		Sort of			A lot		Completely

f. I am not forgiving because I want to get revenge.

1	2	3	4	5	6	7	8	9
-----<								
Not at all	A little		Sort of			A lot		Completely

Section B

g. I am not forgiving because I do not want to think about them.

1	2	3	4	5	6	7	8	9
>-----<								
Not at all		A little		Sort of		A lot		Completely

h. I am not forgiving because I am too sad.

1	2	3	4	5	6	7	8	9
>-----<								
Not at all		A little		Sort of		A lot		Completely

i. I am not forgiving because they do not deserve it.

1	2	3	4	5	6	7	8	9
>-----<								
Not at all		A little		Sort of		A lot		Completely

j. I am not forgiving because I am fine without forgiving them.

1	2	3	4	5	6	7	8	9
>-----<								
Not at all		A little		Sort of		A lot		Completely

There may be another reason why you are not forgiving. If so please explain the reason and rate its importance or influence on you.

k. I am not forgiving because:

1	2	3	4	5	6	7	8	9
>-----<								
Not at all		A little		Sort of		A lot		Completely

Section B

I. I am not forgiving because:

1 2 3 4 5 6 7 8 9
>-----<
Not at all A little Sort of A lot Completely

You are now finished. Please stop.

Appendix B

Demographic Questions

What is your gender?

Male Female

What is your age?

What is your ethnic background?

White – non-Hispanic
 African-American
 Asian
 Hispanic
 Other

What is your current student status?

Freshman
 Sophomore
 Junior
 Senior
 Graduate Student
 Other: _____

What was your student status the spring semester of **2007**?

High School – not planning to attend VT
 High School – planning to attend VT
 VT Freshman
 VT Sophomore
 VT Junior
 VT Senior
 Enrolled at another college
 Other

What is your current marital status?

Single – never married
 Engaged / Committed relationship
 Married
 Divorced
 Separated

Appendix C

Marlowe-Crowne Social Desirability Scale

Personal Reaction Inventory

Listed below are a number of statements concerning personal attitudes and traits. Read each item and decide whether the statement is *true* or *false* as it pertains to you personally.

1. Before voting I thoroughly investigate the qualifications of all the candidates.
True False
2. I never hesitate to go out of my way to help someone in trouble.
True False
3. It is sometimes hard for me to go on with my work if I am not encouraged.
True False
4. I have never intensely disliked anyone.
True False
5. On occasion I have had doubts about my ability to succeed in life.
True False
6. I sometimes feel resentful when I don't get my way.
True False
7. I am always careful about my manner of dress.
True False
8. My table manners at home are as good as when I eat out in a restaurant.
True False
9. If I could get into a movie without paying and be sure I was not seen I would probably do it.
True False
10. On a few occasions, I have given up doing something because I thought too little of my ability.
True False
11. I like to gossip at times.
True False
12. There have been times when I felt like rebelling against people in authority even though I knew they were right.
True False

13. No matter who I'm talking to, I'm always a good listener.
True False
14. I can remember "playing sick" to get out of something.
True False
15. There have been occasions when I took advantage of someone.
True False
16. I'm always willing to admit it when I make a mistake.
True False
17. I always try to practice what I preach.
True False
18. I don't find it particularly difficult to get along with loud mouthed, obnoxious people.
True False
19. I sometimes try to get even rather than forgive and forget.
True False
20. When I don't know something I don't at all mind admitting it.
True False
21. I am always courteous, even to people who are disagreeable.
True False
22. At times I have really insisted on having things my own way.
True False
23. There have been occasions when I felt like smashing things.
True False
24. I would never think of letting someone else be punished for my wrongdoings.
True False
25. I never resent being asked to return a favor.
True False
26. I have never been irked when people expressed ideas very different from my own.
True False
27. I never make a long trip without checking the safety of my car.
True False
28. There have been times when I was quite jealous of the good fortune of others.
True False

29. I have almost never felt the urge to tell someone off.

True False

30. I am sometimes irritated by people who ask favors of me.

True False

31. I have never felt that I was punished without cause.

True False

32. I sometimes think when people have a misfortune they only got what they deserved.

True False

33. I have never deliberately said something that hurt someone's feelings.

True False

Appendix D

State Trait Inventory of Cognitive and Somatic Anxiety, State Measure

Instructions

Below is a list of statements which can be used to describe how people feel. Beside each statement are four numbers which indicate the degree to which each statement is self-descriptive of mood at this moment (e.g., 1 *_not at all*, 4 *_very much so*). Please read each statement carefully and circle the number which best indicates ***how you feel right now, at this very moment***, even if this is not how you usually feel.

	Not at all	A little	Moderately	Very much so
1. My heart beats fast.	1	2	3	4
2. My muscles are tense.	1	2	3	4
3. I feel agonized over my problems.	1	2	3	4
4. I think that others won't approve of me.	1	2	3	4
5. I feel like I'm missing out on things because I can't make up my mind soon enough.	1	2	3	4
6. I feel dizzy.	1	2	3	4
7. My muscles feel weak.	1	2	3	4
8. I feel trembly and shaky.	1	2	3	4
9. I picture some future misfortune.	1	2	3	4
10. I can't get some thought out of my mind.	1	2	3	4
11. I have trouble remembering things.	1	2	3	4
12. My face feels hot.	1	2	3	4
13. I think that the worst will happen.	1	2	3	4
14. My arms and legs feel stiff.	1	2	3	4
15. My throat feels dry.	1	2	3	4
16. I keep busy to avoid uncomfortable thoughts.	1	2	3	4
17. I cannot concentrate without irrelevant thoughts intruding.	1	2	3	4
18. My breathing is fast and shallow.	1	2	3	4
19. I worry that I cannot control my thoughts as well as I would like to.	1	2	3	4
20. I have butterflies in the stomach.	1	2	3	4
21. My palms feel clammy.	1	2	3	4

Appendix E

Brief Anger-Aggression Questionnaire

Directions: Read the statements listed below. Rate each one so that it describes your *current* way of feeling or behaving.

1. When I really lose my temper, I am capable of hitting or slapping someone.

0	1	2	3	4
Not at all	Rarely	Sometimes	Frequently	Very frequently

2. I get mad enough to hit, throw, or kick things.

0	1	2	3	4
Not at all	Rarely	Sometimes	Frequently	Very frequently

3. I easily lose my patients with people.

0	1	2	3	4
Not at all	Rarely	Sometimes	Frequently	Very frequently

4. If someone doesn't ask me to do something in the right way, I will avoid, delay doing it, or not do it at all.

0	1	2	3	4
Not at all	Rarely	Sometimes	Frequently	Very frequently

5. At times I feel I get a raw deal out of life.

0	1	2	3	4
Not at all	Rarely	Sometimes	Frequently	Very frequently

6. When I get made I say threatening or nasty things.

0	1	2	3	4
Not at all	Rarely	Sometimes	Frequently	Very frequently

Appendix F

Santa Clara Strength of Religious Faith Questionnaire

Please answer the following questions about religious faith using the scale below. Indicate the level of agreement (or disagreement) for each statement.

1 = strongly disagree 2 = disagree 3 = agree 4 = strongly agree

1. My religious faith is extremely important to me.
1 2 3 4
2. I pray daily.
1 2 3 4
3. I look to my faith as a source of inspiration.
1 2 3 4
4. I look to my faith as providing meaning and purpose in my life.
1 2 3 4
5. I consider myself active in my faith or church.
1 2 3 4
6. My faith is an important part of who I am as a person.
1 2 3 4
7. My relationship with God is extremely important to me.
1 2 3 4
8. I enjoy being around others who share my faith.
1 2 3 4
9. I look to my faith as a source of comfort.
1 2 3 4
10. My faith impacts many of my decisions.
1 2 3 4

Appendix G

Enright Forgiveness Inventory Sample Items

I feel _____ toward him/her. (Place each word in the blank when answering each item.)

I feel...	Strongly Disagree	Disagree	Slightly Disagree	Agree	Slightly Agree	Strongly Agree
1. warm	1	2	3	4	5	6

Regarding this person, I do or would _____. (Place each word or phrase in the blank when answering each item.)

I do or would...	Strongly Disagree	Disagree	Slightly Disagree	Agree	Slightly Agree	Strongly Agree
21. show friendship	1	2	3	4	5	6

I think he or she is _____. (Place each word or phrase in the blank when answering each item.)

I think he or she is...	Strongly Disagree	Disagree	Slightly Disagree	Agree	Slightly Agree	Strongly Agree
41. wretched	1	2	3	4	5	6

Regarding this person, I _____	Strongly Disagree	Disagree	Slightly Disagree	Agree	Slightly Agree	Strongly Agree
54. wish him/her well	1	2	3	4	5	6

To what extent have you forgiven the person you rated on this *Attitude Scale*?

Not at all	In progress			Complete forgiveness
1	2	3	4	5

Appendix H

General Measure of Forgiveness, Revised Form, Core Section Only

The following set of questions asks about your current feelings regarding this person, group of people, or institution that hurt you. Your answers are confidential.

1. To what extent do you avoid things that have to do with them? (Please circle a number below.)

1	2	3	4	5	6	7	8	9
>-----<								
Not at all		A little		Sort of		A lot		Completely

4. To what extent do you want to make them pay for what they did? (Please circle a number below.)

1	2	3	4	5	6	7	8	9
>-----<								
Not at all		A little		Sort of		A lot		Completely

5. To what extent are you angry at them? (Please circle a number below.)

1	2	3	4	5	6	7	8	9
>-----<								
Not at all		A little		Sort of		A lot		Completely

6. To what extent is your body relaxed when you say their name repeatedly in your head? (Please circle a number below.)

1	2	3	4	5	6	7	8	9
>-----<								
Not at all		A little		Sort of		A lot		Completely

8. To what extent do you have negative emotions about them? (Please circle a number below.)

1	2	3	4	5	6	7	8	9
>-----<								
Not at all		A little		Sort of		A lot		Completely

12. To what extent do you have negative thoughts about them? (Please circle a number below.)

1	2	3	4	5	6	7	8	9
>-----<								
Not at all		A little		Sort of		A lot		Completely

15. To what extent do you want to get revenge on them? (Please circle a number below.)

1	2	3	4	5	6	7	8	9
>-----<								
Not at all		A little		Sort of		A lot		Completely

16. To what extent have you told other people that you have forgiven them? (Please circle a number below.)

1	2	3	4	5	6	7	8	9
>-----<								
Not at all		A little		Sort of		A lot		Completely

18. To what extent do you feel at ease when you think about them? (Please circle a number below.)

1	2	3	4	5	6	7	8	9
>-----<								
Not at all		A little		Sort of		A lot		Completely

22. To what extent do you like to imagine that they never existed? (Please circle a number below.)

1	2	3	4	5	6	7	8	9
>-----<								
Not at all		A little		Sort of		A lot		Completely

24. To what extent do you feel peaceful when you think about them? (Please circle a number below.)

1	2	3	4	5	6	7	8	9
>-----<								
Not at all		A little		Sort of		A lot		Completely

25. To what extent do you hate them? (Please circle a number below.)

1	2	3	4	5	6	7	8	9
>-----<								
Not at all	A little		Sort of			A lot		Completely

26. To what extent have you forgiven them for what they did? (Please circle a number below.)

1	2	3	4	5	6	7	8	9
>-----<								
Not at all	A little		Sort of			A lot		Completely

28. To what extent do you *want* to forgive them for what they did? (Please circle a number below.)

1	2	3	4	5	6	7	8	9
>-----<								
Not at all	A little		Sort of			A lot		Completely

29. To what extent do you feel you *should* forgive them for what they did? (Please circle a number below.)

1	2	3	4	5	6	7	8	9
>-----<								
Not at all	A little		Sort of			A lot		Completely

Table 1

Advantages & Disadvantages of Existing Offense-specific Measures of Forgiveness

Measure	Advantages	Disadvantages
1. Trainer (1981)	<ul style="list-style-type: none"> - Theory driven - Acceptable Cronbach's alpha 	<ul style="list-style-type: none"> - Not relevant for non-relationship forgiveness - Applicable only for separation/divorce transgressions - Open-ended scoring problems - Open-ended items time consuming - Limited assessment of specific thoughts/feelings/behaviors
2. WFS (1989)	<ul style="list-style-type: none"> - Theory driven - High Cronbach's alpha - Face valid analysis 	<ul style="list-style-type: none"> - Not relevant for non-relationship forgiveness - Time consuming lengthy measure - Religious wording limits applicability
3. TRIM (1998)	<ul style="list-style-type: none"> - High Cronbach's alpha - Hypothesized structure confirmed through factor analysis - Demonstrated good convergent/ 	<ul style="list-style-type: none"> - Not relevant for non-relationship forgiveness - Only assesses two motivations (revenge/avoidance) & leaves out

discriminant validity

additional thoughts, affect, &
behaviors

4. EFI (2004)

- Theory driven

- Not relevant for non-relationship
forgiveness

- High Cronbach's alpha

- Demonstrated good

- Not appropriate for deceased
transgressors

convergent/discriminant
validity

- Time consuming lengthy measure

- Unidimensionality tested by
factor analysis

- Open-ended items time consuming
- Proprietary measure

Table 2

Eigenvalues and Percent of Variance Explained for Meaningful Factors of the EFI Prior and After Rotation

Total Variance Explained						
Factor	Initial Eigenvalues			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	37.994	63.324	63.324	37.715	62.858	62.858

Extraction Method: Principal Axis Factoring.

Table 3

Open-ended Coding Scheme for Transgression Description and Inter-rater Reliability

Description of Transgressions			
<u>Relationship Transgressions</u>		<u>Non-Relationship Transgressions</u>	
Category	Cohen's Kappa	Category	Cohen's Kappa
Physically Hurt	.96	Personal Crime	.88
Manipulated	.57	Property Crime	.69
Gossip	.84	Robbery	.51
Cheated On	.91	9/11	.67
Abandoned	.55	4/16	.94
Lied To	.78	Not a Crime	.83
Spoken Hurt, Face-to-Face	.64		

Table 4

Open-ended Coding Scheme for Thoughts and Feelings toward Transgressor and Inter-rater

Reliability

Thoughts and Feelings toward Transgressor			
Category		Relationship Transgressions	Non-Relationship Transgressions
		Cohen's Kappa	Cohen's Kappa
Indifferent		.84	.74
Internalized		.67	.60
Externalized		.75	.71
Avoided		.23	.19
Moved On		.16	.32
"Forgiveness"		.98	.92
	Forgiven	.85	.89
	In Progress	1.00	1.00
	Not Forgiven	.66	1.00

Table 5

Descriptive Statistics of the GMF Core 29 Items for Relationship Forgiveness

GMF Item	N	Mean	Std. Deviation	Corrected Item-Total Correlation	Skewness		Kurtosis	
#	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
1	343	6.03	2.674	.508	-.441	.132	-1.100	.263
2	343	7.22	2.280	.277	-1.068	.132	-.172	.263
3	343	6.36	2.446	.552	-.627	.132	-.783	.263
4	343	7.55	2.037	.558	-1.622	.132	1.944	.263
5	343	6.45	2.293	.774	-.709	.132	-.590	.263
6	343	5.34	2.830	.643	-.076	.132	-1.411	.263
7	343	5.56	3.165	.290	-.289	.132	-1.526	.263
8	343	6.28	2.350	.710	-.625	.132	-.691	.263
9	343	3.88	2.550	.169	.508	.132	-.936	.263
10	343	7.23	1.950	.596	-1.271	.132	1.082	.263
11	343	6.84	2.461	.461	-.899	.132	-.423	.263
12	343	6.60	2.258	.751	-.829	.132	-.351	.263
13	343	5.59	2.791	.447	-.191	.132	-1.360	.263
14	343	4.75	2.740	.101	.252	.132	-1.322	.263
15	343	7.88	1.920	.540	-1.970	.132	3.170	.263
16	343	4.88	2.898	.460	-.003	.132	-1.431	.263
17	343	5.81	2.551	.152	-.423	.132	-.997	.263
18	343	5.31	2.634	.760	-.037	.132	-1.254	.263
19	343	5.86	2.678	.558	-.437	.132	-1.124	.263
20	343	8.02	1.776	.452	-2.097	.132	4.125	.263
21	343	3.77	2.602	.342	.555	.132	-.935	.263
22	343	7.29	2.461	.481	-1.332	.132	.551	.263
23	343	7.12	2.174	.580	-1.120	.132	.366	.263
24	343	4.65	2.705	.699	.189	.132	-1.225	.263
25	343	7.64	2.135	.594	-1.666	.132	1.763	.263
26	343	5.52	2.720	.718	-.250	.132	-1.281	.263

27	343	6.76	2.449	.473	-.822	.132	-.470	.263
28	343	6.40	2.736	.534	-.671	.132	-.919	.263
29	343	5.69	2.866	.591	-.263	.132	-1.353	.263

Table 6

Descriptive Statistics of the GMF Core 29 Items for Non-relationship Forgiveness

GMF Item	N	Mean	Std. Deviation	Corrected Item-Total Correlation	Skewness		Kurtosis	
#	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
1	287	6.11	3.076	.428	-.532	.144	-1.285	.287
2	287	7.82	2.080	.262	-1.741	.144	1.964	.287
3	287	6.51	2.539	.483	-.626	.144	-.915	.287
4	287	6.27	2.818	.637	-.620	.144	-1.023	.287
5	287	5.31	2.695	.758	-.134	.144	-1.309	.287
6	287	5.33	3.135	.617	-.112	.144	-1.592	.287
7	287	7.38	2.464	.353	-1.400	.144	.637	.287
8	287	5.35	2.718	.703	-.302	.144	-1.187	.287
9	287	2.37	2.170	.171	1.658	.144	1.876	.287
10	287	7.74	1.845	.454	-1.606	.144	1.950	.287
11	287	7.39	2.406	.347	-1.359	.144	.509	.287
12	287	5.89	2.656	.723	-.555	.144	-.931	.287
13	287	5.92	2.939	.534	-.387	.144	-1.338	.287
14	287	5.90	2.911	-.292	-.440	.144	-1.243	.287
15	287	7.04	2.453	.594	-1.094	.144	-.005	.287
16	287	3.62	3.089	.581	.745	.144	-1.049	.287
17	287	3.87	2.697	.040	.516	.144	-1.008	.287
18	287	4.57	3.052	.768	.253	.144	-1.449	.287
19	287	5.56	3.065	.570	-.244	.144	-1.482	.287
20	287	7.88	1.944	.283	-1.780	.144	2.263	.287
21	287	2.90	2.560	.251	1.178	.144	.136	.287
22	287	5.76	3.118	.540	-.373	.144	-1.417	.287
23	287	7.28	2.053	.560	-1.098	.144	.223	.287
24	287	3.85	2.969	.659	.571	.144	-1.172	.287
25	287	6.17	2.769	.683	-.554	.144	-1.072	.287
26	287	3.94	2.923	.735	.572	.144	-1.119	.287

27	287	7.08	2.365	.178	-.960	.144	-.159	.287
28	287	4.21	3.060	.594	.403	.144	-1.341	.287
29	287	4.23	3.067	.567	.392	.144	-1.346	.287

Table 7

Eigenvalues and Percent of Variance Explained for Meaningful Factors of the GMF for Relationship Forgiveness Prior and After Rotation

Total Variance Explained						
Factor	Initial Eigenvalues			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	9.838	33.923	33.923	7.904	27.254	27.254
2	2.860	9.860	43.783	3.694	12.737	39.991
3	1.905	6.569	50.352	1.253	4.320	44.312

Extraction Method: Principal Axis Factoring.

Table 8

Factor Loading Matrix of the GMF for Relationship Forgiveness After Quartimax Rotation

Item	Factor		
	1	2	3
26	.794	.141	-.060
18	.783	.254	-.108
8	.774	.179	.042
12	.772	.230	.141
5	.771	.248	.093
25	.734	-.027	.198
24	.728	.220	-.130
1	.690	-.036	-.058
28	.683	-.036	.102
29	.650	.120	.029
6	.578	.360	-.045
22	.566	.038	.161
16	.524	.067	-.132
21	.424	-.035	.002
7	-.010	.656	.065
10	.333	.644	.036
11	.215	.622	.068
20	.204	.592	.066
23	.362	.585	.072
19	.314	.579	-.014
3	.392	.547	-.198
2	.040	.502	.048
13	.296	.429	-.037
27	.356	.395	-.048
15	.516	.159	.781
4	.494	.240	.642
9	.069	.110	-.014
17	.096	.048	.021

14	.075	.110	.057
----	------	------	------

Extraction Method: Principal Axis Factoring.

Rotation Method: Quartimax with Kaiser Normalization.

Rotation converged in 6 iterations.

Table 9

Eigenvalues and Percent of Variance Explained for Meaningful Factors of the GMF for Non-relationship forgiveness Prior and After Rotation

Total Variance Explained						
Factor	Initial Eigenvalues			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	9.563	32.975	32.975	7.904	29.025	29.025
2	3.404	11.739	44.713	3.694	10.853	39.878
3	1.982	6.834	51.547	1.253	5.479	45.357

Extraction Method: Principal Axis Factoring.

Table 10

Factor Loading Matrix of the GMF for Non-relationship Forgiveness After Quartimax Rotation

Item	Factor		
	1	2	3
5	.846	-.005	.071
8	.831	-.072	.047
12	.810	.052	-.007
18	.783	.259	.035
25	.763	.015	-.054
26	.741	.046	.227
4	.720	-.006	.063
24	.690	.129	.133
15	.649	.085	-.008
28	.625	-.052	.232
22	.597	-.007	-.112
6	.585	.354	.043
16	.566	.113	.317
1	.499	.002	-.077
23	.498	.420	-.154
13	.482	.392	.128
3	.423	.356	-.050
11	.155	.754	-.081
20	.064	.744	-.036
7	.156	.710	.048
10	.323	.570	-.164
19	.458	.470	.127
r2	.135	.415	-.073
17	.029	-.130	.698
r9	.148	-.079	.618
14	-.231	-.084	-.470
21	.265	-.096	.271
29	.570	.031	.124

27	.149	.257	-.220
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Extraction Method: Principal Axis Factoring.

Rotation Method: Quartimax with Kaiser Normalization.

Rotation converged in 6 iterations.

Table 11

Item Correlation Table for the GMF Revised for Relationship Forgiveness

Inter-Item Correlation Matrix															
	1	4	5	6	8	12	15	16	18	22	24	25	26	28	29
1	1.000														
4	.279	1.000													
5	.505	.551	1.000												
6	.403	.324	.516	1.000											
8	.554	.472	.699	.485	1.000										
12	.565	.546	.698	.515	.795	1.000									
15	.310	.820	.496	.337	.456	.548	1.000								
16	.300	.178	.390	.300	.318	.314	.166	1.000							
18	.506	.358	.616	.649	.581	.596	.373	.453	1.000						
22	.457	.363	.458	.362	.406	.428	.425	.238	.461	1.000					
24	.503	.333	.570	.598	.562	.546	.324	.415	.781	.406	1.000				
25	.500	.456	.589	.396	.596	.606	.500	.362	.530	.501	.451	1.000			
26	.477	.389	.643	.456	.579	.582	.377	.578	.626	.395	.580	.568	1.000		
28	.412	.334	.445	.297	.439	.457	.413	.504	.492	.379	.431	.559	.650	1.000	
29	.326	.402	.538	.332	.499	.488	.351	.423	.495	.345	.432	.495	.639	.568	1.000

Table 12

Item Correlation Table for the GMF Revised for Non-relationship Forgiveness

Inter-Item Correlation Matrix															
	1	4	5	6	8	12	15	16	18	22	24	25	26	28	29
1	1.000														
4	.320	1.000													
5	.432	.721	1.000												
6	.342	.351	.463	1.000											
8	.435	.610	.760	.449	1.000										
12	.413	.586	.723	.453	.809	1.000									
15	.191	.795	.616	.344	.501	.532	1.000								
16	.178	.389	.471	.321	.411	.444	.361	1.000							
18	.402	.476	.586	.640	.568	.571	.454	.537	1.000						
22	.289	.442	.479	.277	.503	.481	.459	.306	.404	1.000					
24	.325	.353	.509	.496	.525	.488	.285	.528	.710	.412	1.000				
25	.358	.632	.638	.451	.625	.611	.641	.417	.590	.554	.448	1.000			
26	.305	.550	.628	.387	.570	.546	.495	.648	.596	.465	.550	.550	1.000		
28	.243	.467	.524	.319	.472	.438	.436	.504	.448	.388	.435	.552	.756	1.000	.
29	.239	.419	.481	.275	.395	.354	.388	.424	.410	.364	.400	.499	.683	.752	1.000

Table 13

Convergent Validity Correlation Table for Relationship and Non-relationship Forgiveness

		Correlations						
		Non-Relationship #26		GMF Revised Relationship (Without #26)		GMF Revised Non-Relationship #26		Non-Relationship #26
Relationship #26	Pearson Correlation	.155**	.775**	.072				
Non-Relationship #26	Pearson Correlation		.121*	.780**				
EFI	Pearson Correlation				.811**	.067	.630**	.097
GMF Revised Relationship	Pearson Correlation					.104		

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

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

n = 341 for relationship comparisons

n = 286 for non-relationship comparisons

Table 14

Discriminant Validity Correlation Table for Relationship and Non-relationship Forgiveness

		Correlations					
		GMF Revised Relationship	GMF Revised Non- Relationship	BAAQ	SCSORF	STICSA Somatic	STICSA Cognitive
BAAQ	Pearson Correlation	-.264**	-.231**				
SCSORF	Pearson Correlation	.252**	.140*	-.162**			
STICSA Somatic	Pearson Correlation	-.260**	-.150*	.431**	-.036		
STICSA Cognitive	Pearson Correlation	-.251**	-.194**	.487**	-.045	.624**	
M-C SDS	Pearson Correlation	.183**	.204**	-.442**	.207**	-.154**	-.293**

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

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

n = 340 for GMF relationship comparisons and
between discriminant validity measures

n = 285 for GMF non-relationship comparisons

Table 15

Comparisons of Correlated Correlations for Both Relationship and Non-relationship

Forgiveness

Common Dependent Variable			
GMF Revised Relationship Forgiveness		GMF Revised Non-Relationship Forgiveness	
EFI	A		
Self-Report Forgiveness (i.e., #26)	A	Self-Report Forgiveness (i.e., #26)	A
BAAQ	B	BAAQ	B
STICSA Somatic	B	STICSA Somatic	B
STICSA Cognitive	B	STICSA Cognitive	B
SCSORF	B	SCSORF	B
M-C SDS	B	M-C SDS	B

*Correlations sharing the same letter are not statistically different. Correlations with different letters are statistically different.

Figure 1

Scree Plot for the Unrotated GMF for Relationship Forgiveness

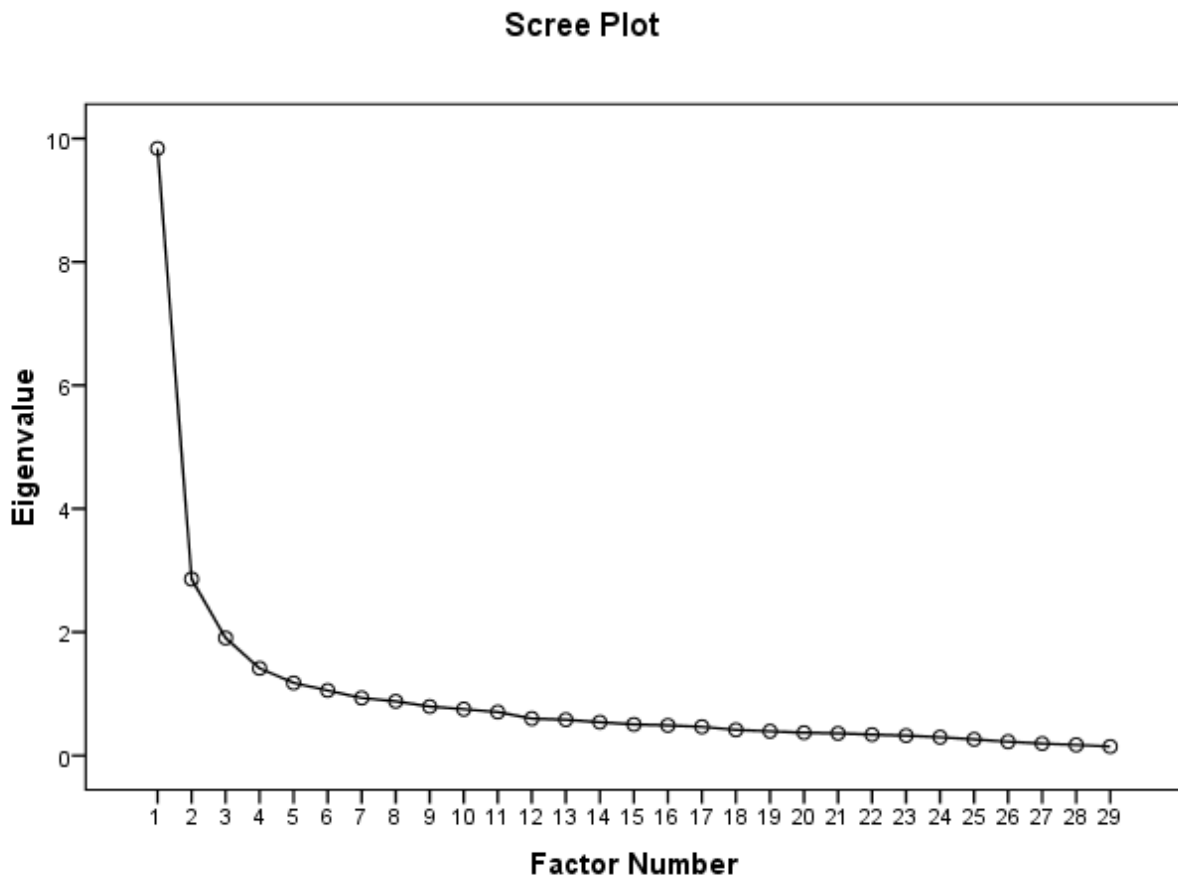


Figure 2

Scree Plot for the Unrotated GMF for Non-relationship Forgiveness

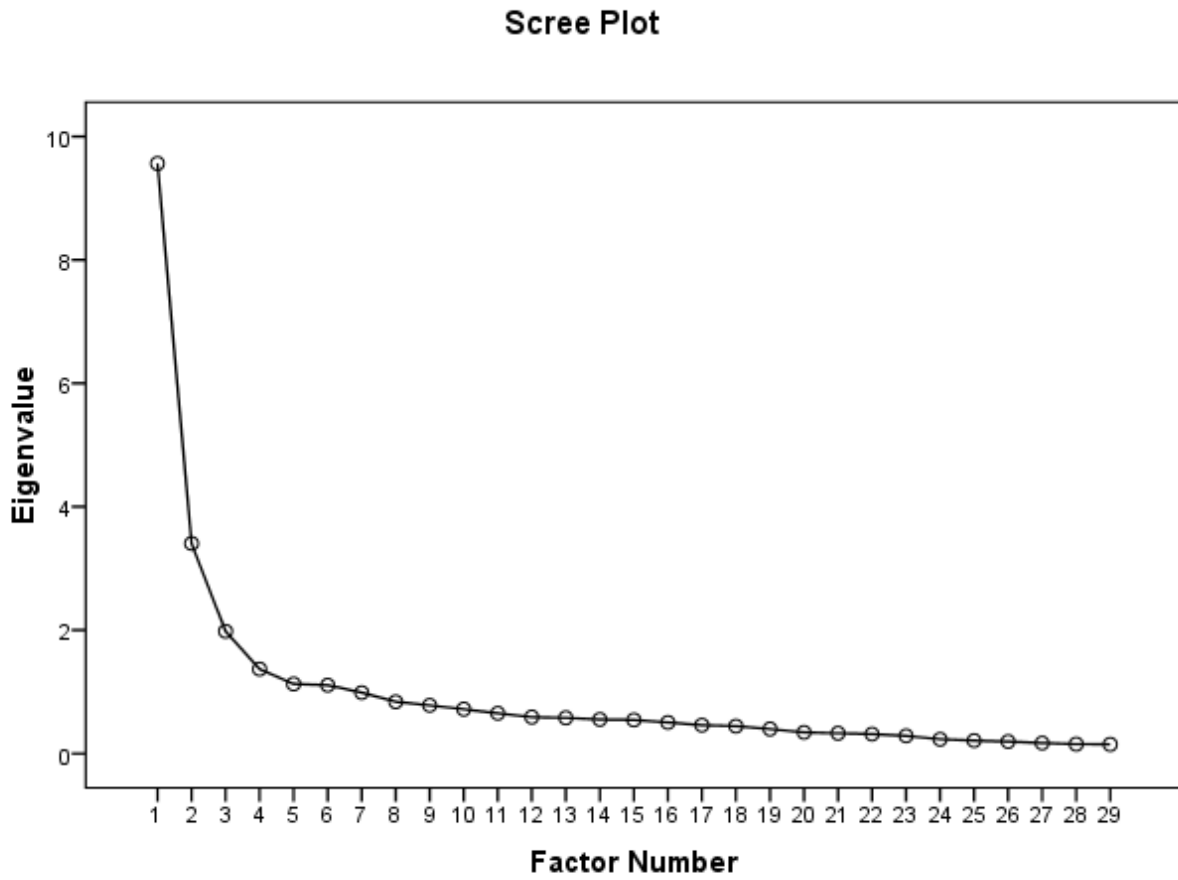
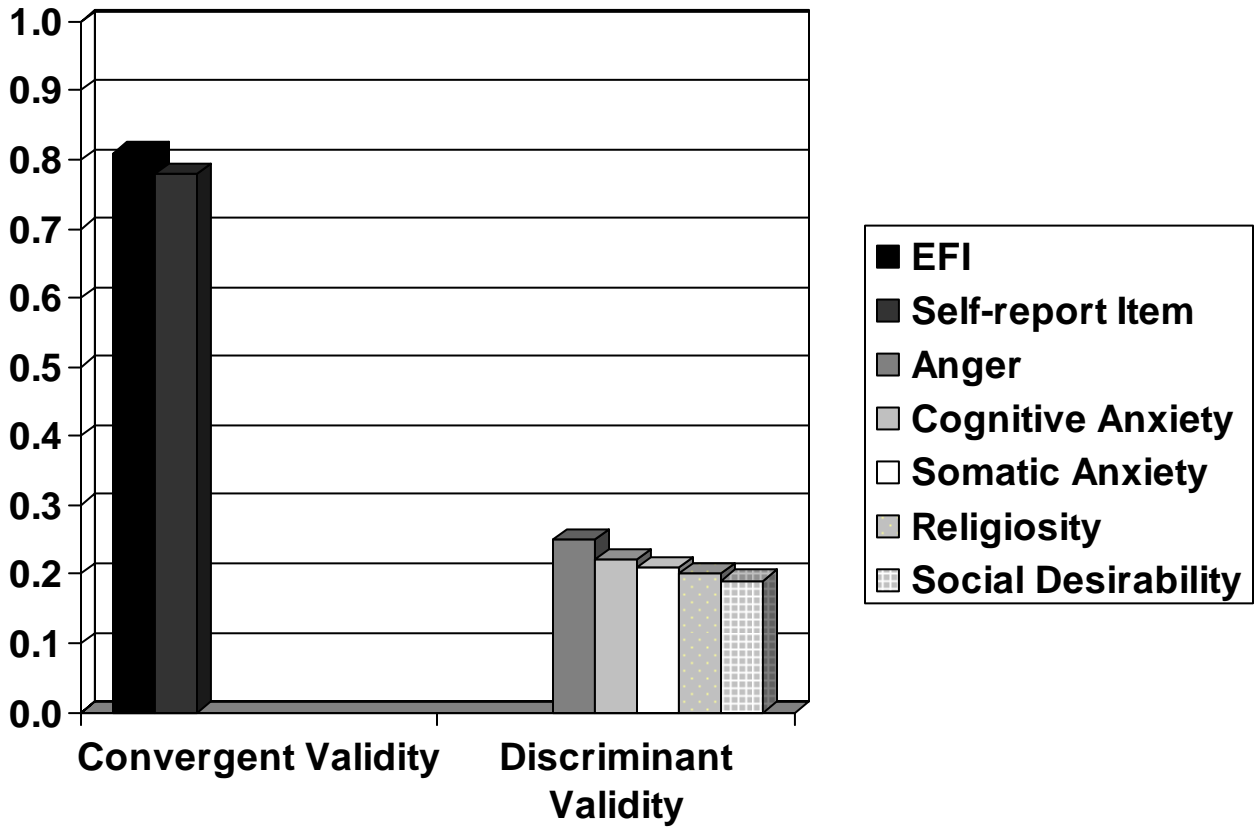


Figure 3

Table of Absolute Averaged Correlations for Convergent and Discriminant Validity for the GMF Relationship and Non-relationship Forgiveness as the Common Comparison



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