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Dimensions of Grace: Factor Analysis of Three Grace Scales

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Abstract

Measuring grace is challenging. Prior research found the Grace Scale (GS), Richmond Grace Scale (RGS), and The Amazing Grace Scale (TAGS) to be reliable, have promising convergent and divergent validity, and to inter-correlate strongly. However, they may tap different constructs, or grace may be multidimensional (Bufford, Blackburn, Sisemore, & Bassett, 2015). Here two exploratory factor analyses of the combined items showed five factors: experiencing God's grace, costly grace, grace to self, grace from others, and grace to others, partially paralleling Watson, Chen and Sisemore (2011). Items from all three scales loaded on Factor 1, only items from the RGS loaded on Factor 2. The remaining factors were mostly GS items and a few RGS items. The three scales measure somewhat different constructs. Preliminary validity for the five factors is promising. Regressions showed that combinations of the other four proposed scales accounted for at most about one third of the variance on any given grace factor. The five factors showed different patterns of relationships to criterion variables. We propose a 36 item Dimensions of Grace Scale combining items from all three scales for further exploration.

[182 words]

Keywords: grace; gratitude; positive psychology; coping; religion/spirituality; spiritual well-being; shame; adverse childhood experiences

Dimensions of Grace

Psychologists have studied religious behavior and belief for most of the history of the discipline, gaining greatest traction in the historic work of James (1902/1961). While James focused on exceptional religious experiences, Freud (1913/1950, 1923/1961, 1939/1955) viewed religious faith as harmful and this bias shaped his theories about religion. Yet, from his followers onward, psychologists have generally sought to be more objective in their approach to religion.

Part of this objectivity is viewing religion and spirituality in the language of the adherents, or in the terms of Watson and colleagues (e.g., 2003), its ideological surround. As religion is often a life-encompassing system of meaning (Park, 2013), it follows that it involves ideas and concepts that might be alien to those who do not share its belief systems. We note, too, that while many do not consider themselves to be religious they too have life-encompassing belief systems of meaning that pose similar challenges.

Grace is an excellent example of such a concept. Grace is a broadly cultural notion; the Apostle Paul used a common Greek word (*charis*) from which derive common English terms such as *grace*, *graceful* and *gracious* as the term he frequently used in the letters (epistles) he wrote that are now commonly found in the Christian Bible.

More generally, in human experience, we exhibit and observe grace or clumsiness. We may encounter graciousness—or anger, resentment, and hostility. We hope for or grant grace periods. McMinn (2008) identified this commonplace element of grace. He wrote, “After many years of providing psychotherapy and studying the scientific literature on its effectiveness, I am

convinced that good therapy works because it is a place that emulates grace. It is a place of acceptance and mercy . . .” (p. 53).

Yet grace has garnered little attention among psychologists, even in the positive psychology movement (e.g., Peterson & Seligman, 2004). In one of the authors’ initial literature searches on APA databases several years ago, the only articles to come up for the key word “grace” were about the television program, “Will and Grace.” More recent searches commonly produce documents that include the concept but do not measure grace (e.g., Dudley, 1995; Gowack, 1998; McMinn, 2008; McMinn, Ruiz, Marx, Wright, & Gilbert, 2006; Wahking, 1992).

Similar Christian constructs have already been more extensively explored in general psychological literature, including compassion, gratitude, forgiveness, and humility. Compassion, or sympathetic pity for the suffering of others, has been explored as a characteristic or virtue to be understood both in higher education settings (Rashedi, Plante, & Callister, 2015) and within the general population (Macbeth & Gumley, 2012). Moreover, a newer model of therapy, Compassion-Focused Therapy (CFT) has been developed and studied in order to serve clients with mental health symptoms that are related to high levels of self-criticism and shame (Gilbert, 2014; Leaviss & Uttley, 2015). Forgiveness has been explored as an essential element to moral development and interpersonal relationships (Enright & Gassin, 1992; McCullough, 1994; McCullough & Worthington, 1994) and a mediator to change in therapy (Sandage & Worthington, 2010). Gratitude has been suggested to promote psychological well-being in the counseling room (Nelson, 2009; Young, 2012) and gratitude assessment tools measure gratitude in everyday life of adults, adolescents, and children (Froh, Fan, Emmons, Bono, Hueber, & Watkins, 2011; McCullough, Emmons, & Tsang, 2002). Humility has also received significant attention (e.g., Krause & Hayward, 2015).

The Grace Construct

Grace is a multi-faceted construct. It has roots in the common domain and special significance in the religious/spiritual domain. In Christian theology, grace has two broad facets: special grace and common grace. Special grace refers to the unconditional kindness God shows to humans. Common grace refers to God's giving and sustaining life and its blessings to all creatures and the earth in general (e.g., Matthew 5:45). To Christians grace applies particularly to God's special mercies to his people—to Israel in the Old Testament and to followers of Christ in the New.

Religious ideas of grace are deeply embedded in the Christian religious tradition. Christians believe that God is holy and thus would be justified in pouring out wrath on sinful humans. Yet, God instead offers grace to people. This is seen in both common grace, letting the rain come to just and unjust alike (Matthew 5:45), and more particularly in saving grace that forgives sin (Ephesians 2:8-9).

The Christian who sees his or her life as redeemed from God's wrath by God's own grace could well be transformed by this belief both personally and interpersonally. Sensing a divine forgiveness may impart psychological benefits. Just as the Lord's Prayer assumes one who is forgiven will be forgiving, one might anticipate that the person who receives grace would be inclined to bestow grace on others, enacting it into his or her life. As such, this enacted grace (Blackburn, Sisemore, Smith, & Re, 2012) might be called graciousness, and might even be a virtue.

Persons who believe that God has given them unmerited favor would seem to be inclined to share the same toward others. Similarly, those who have experience human grace seem more likely to manifest it than those who have encountered human gracelessness in all its many forms.

Given the potential ramifications of grace, greater scientific attention to it seems warranted in both of its dimensions: divine grace received and grace enacted in one's life, something that may not necessarily occur (Blackburn, Sisemore, Smith, & Re, 2012).

Among the forms of grace proposed by various writers are common or natural and special grace. Common grace includes sunshine and rain, food and shelter, human kindness, and so on. Special grace includes saving or effective grace, and sanctifying grace (Lagasse, 2012). While common grace is considered a characteristic of our world, special grace is generally considered to be divine grace.

Grace perhaps has its fullest development in the Christian tradition with its strong emphasis on undeserved divine favor. Yet grace echoes in other traditions as well. Allah is described in the Qur'an as being gracious to those who follow him. Islam points to the graciousness of Allah and at least some Muslims see the items of the scales analyzed here as commensurate with Islam (M. Dalir and F. Rasaneh, Iranian psychologists, personal communication, June 16, 2015). Similarly, Judaism esteems the *hesed* or loving-kindness of Yahweh in being good to his people even when they stray. These monotheistic traditions tend to see grace as initiated with God.

Non-theistic religions might see grace as something shown by oneself to oneself, such as in the concept of self-compassion receiving so much attention in psychology today (e.g., Neff & Vonk, 2009). Self-compassion draws on Buddhist traditions and mindfulness; it is a grace offered to oneself in light of the inevitability of suffering, whereas divine grace is a positive favor bestowed on unworthy recipients. Grace can also become interpersonal, being shown from one person to another, whether as a response to sensing God's grace or simply as an act of altruism.

So, whether special grace to believers, as a gift from God to all in general, or grace shown between persons, grace may be defined as an act of showing kindness, generosity, or mercy to someone who is undeserving and potentially incapable of returning the kindness shown.

Grace is related to but distinct from several other constructs, including altruism, love and kindness, gratitude, forgiveness, and mercy. Love and kindness are broader concepts; grace is but one of the many ways in which love or kindness might be manifest.

Mercy involves withholding of a consequence for an offense or wrongdoing. Mercy is thus more related to a forgiving of a debt or harm; while grace encompasses giving mercy, it also includes granting a free and undeserved gift.

Forgiveness is a related construct, closely related to both grace and mercy. It has been extensively researched (e.g., Worthington et al., 2013). Like grace, forgiveness is unmerited; however, like mercy, forgiveness involves addressing harm or wrongs. Unlike mercy, however, forgiveness may occur even after the penalty or consequence of a wrong has been exacted.

Finally, gratitude and graciousness are appropriate responses to receiving grace. One of the manifestations of gratitude is that sometimes the recipient extends grace to someone else. Perhaps sometimes we “pay it forward” but it seems possible that even in these instances we have already experienced grace in some way.

Forgiveness, mercy, and compassion toward others and self seem to be components of grace directed in specific ways. We suspect that these patterns may vary across religious and non-religious traditions.

Grace Measures

Before the many effects of grace can be explored, measurement tools are needed. Tjeltveit (2004) initially suggested the importance of formal exploration of grace in therapy,

noting that “although we can’t measure the reality of grace, we can measure people’s experience of, and beliefs about, grace, and then empirically establish what other measurable dimensions of human life correspond to those experiences and beliefs” (p. 110). Watson and colleagues made initial efforts at such in the 1980s (Watson, Morris, & Hood, 1988a, 1988b). Recent efforts have begun to look at the idea of “relational grace” (Sells, Beckenbach, & Patrick, 2009; Beckenbach, Patrick, & Sells, 2010; Patrick, Beckenbach, Sells, & Reardon, 2013) as occurring between marital pairs. However, Sells et al. encountered problems in reliably measuring the construct. These appear to have more recently been solved by using a four-point Likert continuum rather than Yes/No responses (Cook, 2013).

Over the past few years, three projects have developed scales to measure the construct of grace. Bufford and colleagues (Payton, Spradlin, & Bufford, 2000; Spradlin, 2002) were the first. The Grace Scale (Spradlin, 2002) showed adequate internal consistency, expected relationships with demographics and no gender effect. Grace and shame had a moderate negative correlation and grace and spiritual well-being a moderately positive one. Grace was hypothesized to be negatively correlated with shame, and 28% of the variance of the Grace Scale had a negative loading from shame.

Sisemore and colleagues (Sisemore et al., 2011; Watson, Chen, & Sisemore, 2011) conducted several studies to develop the Richmond Grace Scale. After initial validation, it showed grace to have an inverse relationship with anxiety and depression, and a positive one with mental health. Christians in counseling showed lower scores on grace and higher distress than those not in counseling. Blackburn, Sisemore, Smith, and Re (2012) found that grace was positively related to forgiveness and hopefulness, though there was an age effect that suggests an understanding of grace may mature with age.

The Amazing Grace Scale (Bassett & the Roberts Wesleyan Psychology Research Group, 2013) is the most recent. The team identified sixteen items which loaded on two orthogonal factors which they identified as $Grace_{identified}$ and $Grace_{awareness}$. Using simultaneous entry regressions, they found that identified faith on their short version of the Christian Religious Internalization Scale (Ryan, Rigby, & King, 1993); and gratitude measured by the Gratitude Questionnaire-Six Item Form (GQ-6; McCullough, Emmons, & Tsang, 2002) predicted $Grace_{identified}$, while identified faith, intrinsic faith, and Christian identity predicted $Grace_{awareness}$. TAGS showed no relationship with extrinsic social faith. Their second study showed a short version of the TAGS was significantly and positively related to Christian identity, extrinsic personal faith, intrinsic faith, empathic concern, forgiveness of others, situational forgiveness, gratitude, and a short version of the GS omitting the negatively worded items. The short TAGS did not correlate significantly with self-forgiveness or the Quest orientation in this study. The final study in this report found an alpha of .94 for the TAGS. No relationship was found between the TAGS and a religious legalism measure developed for use in the study or with the Quest orientation. However, significant relationships were again found with Christian identity, extrinsic-personal faith, intrinsic faith, and CRIS identified faith.

The three grace scales showed significant correlations with each other (Bufford et al., 2015). The Grace scale showed significant positive correlations with spiritual well-being and both religious and existential well-being, gratitude, and positive religious coping; it showed negative correlations with internalized shame, negative religious coping, childhood adversity, and a measure of psychological distress (Bufford et al., 2015). The Richmond Grace Scale (RGS) showed this same pattern of correlations except that it did not correlate significantly with childhood adversity (Bufford et al., 2015). Sisemore et al. (2011) found that the RGS

correlated negatively with anxiety and depression; Watson, Chen, and Sisemore (2011) also found a negative correlation with depression and positive correlations with self-compassion, intrinsic religious orientation, and extrinsic personal religious orientation. The TAGS scale showed positive correlations with Christian identity, intrinsic and extrinsic faith, empathic concern, forgiveness, gratitude, and an adapted version of the Grace Scale; it showed a negative correlation with Quest (Bassett et al., 2013).

The developers of these scales decided to collaborate to consider how an even stronger scale might be constructed drawing from all three measures (Bufford, Blackburn, Sisemore, & Bassett, 2015). Bufford et al. found that the three measures had moderately strong correlations with each other ($r = 0.55$ to 0.66) and similar relationships to measures of religion/spirituality, but distinct patterns of relationships to measures of psychological health and distress. The three scales seemed to measure somewhat different things. Differences in the underlying constructs, contamination by other concepts, or an underlying multidimensional structure for grace could account for these differences. Table 1 provides an overview of these grace measures.

Research Goal

The primary goal of the present study is was to explore the dimensions of grace by factor analysis as a step toward developing a simpler scale that can be more widely used and that adequately assesses grace as currently conceptualized. We also further explored empirical correlates of grace and sought to shed light on whether the items of the grace scales measure the more distinctive aspects of grace mentioned above, or in fact perhaps encompass a different set of constructs altogether.

Methods

Participants

A participant sample was obtained through direct request at graduate and undergraduate schools in the Southeast, Northeast, and Northwestern United States; all but one of these institutions had strong Christian identities, while one was a large state university in the Southeast. Participants completed the survey online via the Survey Monkey website. No personally identifying information was gathered from participants. Participants may have received academic extra credit for participation in the study. The final sample consisted of 519 persons: 364 females (70.1%) and 151 males (29.1%). Participants were of varied race, though disproportionately Caucasian: 427 Caucasian (82.3%), 46 African-American (8.9%), 24 Asian (4.6%), 26 Hispanic (5.0%), 8 Native American (1.5%), and 4 “No Response” (0.8%). Participants indicated their religion as Christian (466; 89.8%), Agnostic (13; 2.5%), Atheist (2; 0.4%), Hindu (1; 0.02%) or Islamic (2; 0.4%).

Materials

Materials included a demographic questionnaire, the three measures of grace, and a group of criterion measures to assess convergent and discriminant validity. Each is discussed in turn.

Demographic Questionnaire. The demographic questionnaire asked participants to indicate their age, educational level, gender, ethnicity, religious affiliation, frequency of attendance at religious services, level of engagement in personal religious activities (e.g., prayer, meditation, etc.), life satisfaction, and degree of belief in God. They were also asked to respond to the Dawkins Atheism Question.

Grace Measures. The Grace Scale (Payton, Spradlin, & Bufford, 2000; Spradlin, 2002) included 40 items measuring one’s experience of grace. The measure demonstrated adequate internal consistency ($\alpha = .79$). The Richmond Grace Scale (RGS; Blackburn, Sisemore, Smith, & Re, 2012; Sisemore et al., 2011; Watson, Chen & Sisemore, 2011) included 27 items measuring

one's understanding and experience of grace. The RGS demonstrated strong internal consistency ($\alpha = .94$). The Amazing Grace Scale (TAGS; Bassett et al., 2012) is a 16-item scale measuring one's experience of grace. The TAGS also demonstrated strong internal consistency ($\alpha = .97$).

Criterion Measures. The Spiritual Well-Being Scale (SWB; Ellison, 1983; Paloutzian & Ellison, 1982; Paloutzian, Bufford, & Wildman, 2012) is a 20-item measure assessing overall spiritual well-being in individuals and church congregations. The SWB also provides subscale scores in Existential Well-Being (EWB) regarding one's life purpose and satisfaction and Religious Well-Being (RWB) regarding one's relationship with God. The SWB demonstrated good internal consistency ($\alpha = .94$); internal consistency was also demonstrated for the subscales EWB ($\alpha = .89$) and RWB ($\alpha = .94$) in this study.

The Gratitude Questionnaire-6 (GQ-6; Emmons, 2004; McCullough, Emmons, & Tsang, 2002; McCullough, Kilpatrick, Emmons, & Larson, 2001) is a 6-item assessment measuring one's experience of in everyday life. Participants respond to each item based on a 7-point Likert scale. The GQ-6 demonstrated good internal consistency in this study ($\alpha = .83$).

The Brief R-COPE (Pargament, Koenig, & Perez, 2000; Pargament, Feuille, & Burdzy, 2011) is a 14-item measure assessing positive and negative religious coping with major life stressors. It is an abbreviated version of the full RCOPE measurement. Positive religious coping ($\alpha = .92$) and negative religious coping ($\alpha = .87$) both demonstrated good internal consistency.

The Internalized Shame Scale (ISS; Cook, 1987) is a 30-item measure assessing an individual's internalized shame, including feelings of worthlessness, inadequacy, and isolation. The ISS demonstrated excellent internal consistency with this sample ($\alpha = .96$).

The Adverse Childhood Experiences Scale (ACES; Felitti et al., 1998) is a 10-item questionnaire that asks participants to answer yes or no to indicate whether they experienced any

among a list of traumatic childhood experiences (e.g., physical neglect, sexual abuse, domestic violence). The ACES demonstrated satisfactory internal consistency ($\alpha = .77$) although it was initially designed to be used as a checklist rather than a scale.

Finally, the ACORN Scale (Brown & Minami, 2009; Minami, Brown, McCulloch, & Bolstrom, 2012; Minami, Wampold, Serlin, Hamilton, Brown, & Kircher, 2008) is a measure of global distress. For the current study, a 14-item version of the assessment formerly adopted by Western Psychological and Counseling Services was utilized. The ACORN Scale demonstrated good internal consistency ($\alpha = .90$) with the current sample.

While prior research on grace is limited and the operations were not well developed, several findings have been reported. Gowack (1998) found grace related to peace and joy in a phenomenological study. Dimitroff and Hoekstra (1998) reported grace was related to healthy marital relationships. Grace also has positive relationships with self-esteem, mental health and spiritual growth (Reisner & Lawson, 1992; Watson, Hood, Morris & Hall, 1985; Wahking, 1992). Bassett (2013) found a small but significant correlation with age as well. Conversely, grace has been found to be inversely related to shame, psychological distress, childhood adversity (Bufford et al., 2015), and depression and hopelessness (Watson et al., 1988a, 1988b). However, Watson et al. found no relationship of grace to anxiety or neuroticism. Thus for our study we predicted that grace would correlate positively with gratitude, positive religious coping, spiritual well-being and both religious and existential well-being. We expected grace to correlate negatively with negative religious coping, internalized shame, psychological distress, and adverse childhood experiences.

Results

Grace Measures

Mean response scores for the three grace measures in the present study are similar to those reported by Bufford et al. (2015). As in Bufford et al., the TAGS again showed a significant degree of negative skew and kurtosis while the GS and RGS did not. Descriptive data and coefficient alphas are provided in Table 2 along with descriptive data for measures to assess convergent and discriminant validity.

Phase 1: Factor Analysis. Initially an exploratory principal components factor analysis with oblimin rotation was conducted. In all, eighteen factors with eigenvalues greater than 1.0 were obtained. However, a scree plot suggested that the three grace measures tap five dimensions that accounted for 49.49% of the total variance. We performed forced factor solutions with from two to six factors. Results best fit for the five factor solution.

The five factors obtained include Experiencing God's Grace, Costly Grace, Grace to Self, Grace from Others, and Grace to Others. All sixteen of the TAGS items loaded on the first factor along with items from the RGS and GS. All items on this factor were worded in the positive direction. The second factor loaded twelve of the RGS items. Factor 3 loaded six GS and one RGS item. Factor 4 loaded seven GS items. Finally, Factor 5 loaded six GS and three RGS items. Eigenvalues were 25.55, 6.60, 4.94, 3.47, and 2.53 respectively (see Figure 1).

We reverse-scored all but the first factor as the items for the remaining factors measured the opposite of grace—or gracelessness. Most of us have experienced gracelessness—and manifested it—all too many times. Perhaps this is the reason that the absence of grace is a major theme in two of the three grace measures and four of the resulting factors.

Factor 1, Experiencing God's Grace, include items such as “Because of God, I feel I have a greater sense of power and energy in my life” (TAGS-12), “Through God's love, I can forgive

others” (RGS-9), and “God’s unconditional love for me gives me the capacity to admit my faults to myself and others” (GS-3).

Factor 2, Costly Grace, includes items such as “Knowing God will forgive lets me do anything I want” (RGS-11). All Costly Grace items are reverse-scored. With Bonhoeffer (1937/1963), we consider such attitudes reflect a troubling misunderstanding of the cost of grace.

Factor 3, Grace to Self, includes items such as “I seldom feel shame” (GS-32) and “I accept my shortcomings” (RGS-5). While mostly beyond the scope of the present discussion, we agree with Spradlin (Payton, Spradlin, & Bufford, 2000; Spradlin, 2002) that shame is inversely related to grace, though they likely are not precisely opposites. Grace to Self in particular taps into the inverse of shame.

Factor 4 taps Grace from Others. Items include “As a child I was confident that at least one of my parents loved me no matter what” (GS-13) and “My mother or father keeps bringing up my past failures” (GS-22; inversely scored). This factor taps the human experience of being forgiven. The sense of forgiveness by others is a hallmark of experiencing the aspect of grace tapped by this factor.

Factor 5 involves Grace to Others. The counterpart to Factor 4, it reflects my inclination to give others grace. Items include “Others must earn my forgiveness” (RGS-27; reverse-coded), and “When offended or harmed by others I generally find it easy to forgive them” (GS-24). Table 3 presents the grace item factor loadings.

Phase 2: Convergent and Divergent Validity. Phase 2 of data analysis involved exploring the properties and convergent and divergent validity of the five factor-based grace scales. Correlations among Factors 1, 2, 4 and 5 were small to moderate and all significant. Factor 3 did not correlate significantly with any of the other factors.

For demographic variables, results showed some significant correlations with age, but the largest was for Factor 5 and accounted for only 2.3% of the variance. Twenty-three of twenty-five correlations with measures expected to be positively related to grace were significant in the expected direction; only two correlations, those with Factor 3 for Gratitude and RCOPE+, were not significant. For measures expected to be negatively correlated with grace, thirteen of fifteen were significant in the expected direction; two were not significant: R-COPE- and Factor 1, and ACORN and Factor 2.

Based on Bufford et al. (2015) we anticipated ACE also would be negatively related to grace. Significant negative correlations were found for Factor 3 (Grace to Self) and Factor 4 (Grace from Others), while Factor 2 (Costly Grace) had a significant positive correlation. The correlation for Factor 4 suggests that those who experienced childhood adversities also tend to experience others as graceless; it accounted for about 16% of the variance.

In all, among criterion variables 42/45 (95.6%) were in the predicted direction. Further, 23/25 expected positive correlations and 16/20 expected negative correlations were found to be significant; thus 86.7% of the correlations were significant in the expected direction. None of the three correlations opposite to the expected direction was significant. Together, these correlations provide strong support for the construct validity of the grace factors.

Phase 3: Scale Development. In Phase 3 we sought to develop a proposed 35 item grace measure that uses the best of the items from the three grace measures. The goal was to simultaneously foster internal consistency, criterion validity, and normal response distributions. This was accomplished by analysis of the individual items for each factor to see which were most promising in these three ways. We then compared how these items performed with the

results for the initial factor scales in a preliminary way. Fuller analysis of the functioning of the proposed new measure awaits further data collection.

We first reviewed the TAGS items, all of which loaded on Factor 1, and found that nine of these items had a negative skew of greater than -1.00; none showed positive skew. The remaining 7 items were further examined as potential items for inclusion in a proposed new grace measure. Item TAGS-6 and TAGS-14 proved to be identical, so TAGS-14 was omitted from further consideration, leaving TAGS-1, TAGS-3, TAGS-5, TAGS-6, TAGS-12, and TAGS-13. While strongly correlated with the other items, we had reservations about how well the item content for TAGS-3 (Because of what God has done in my life, I don't fold easily to peer pressure), TAGS-5 (A day without consciously thinking about God is a day that was misspent), and TAGS-12 (Because of God, I feel I have a greater sense of power and energy in my life) fit the grace construct. Thus they, too, were omitted from further consideration. TAGS-1, TAGS-6 and TAGS-13 remained as candidates to be included in the proposed new grace measure.

Among the RGS items loading on factor one, six items showed negative skew of more than -1.0 and ten items showed positive skew of greater than 1.0 (these items were reverse-scored). The remaining eleven items showed skewness scores with absolute values less than 1.0 (between -1.0 and 1.0) and thus showed promise for inclusion in our proposed new scale. These included RGS-3, RGS-5, RGS-6 and all items from RGS-20 to RGS-27.

Finally, among GS items, we found eight of the forty items had negative skew greater than -1.0. These included GS-1, GS-3, GS-13, GS-14, GS-18, GS-20, GS-29, AND GS-40. The remaining 32 items had skew with absolute values less than 1.0. Only GS-14, which loaded on

Factor 3, is included among the items with significant skew that was proposed for retention for the next version of the grace measure.

Having completed this preliminary analysis of the items gave us pause. We wondered if by omitting all skewed items we may be throwing out the baby with the bathwater. We noted that although 20% of the GS items were negatively skewed the overall distribution of scores was not skewed. We thus chose a rule of thumb to include no more than 20% of the items for each subscale that had either a positive or negative skew greater than 1.0. Second, we decided to choose the “best” seven items for the proposed new subscale to measure each factor with the expectation that the two weaker items on each factor could be omitted after testing on a new sample. Our hope was that the result would then be a 25-item grace measure with five items for each dimension, adequate internal consistency ($\alpha \geq .70$), and good convergent and discriminant validity. Tables 4 and 5 report the item composition of the proposed five Dimension of Grace scales and empirical correlates of the initial grace scales and the proposed Dimensions of Grace scales.

In the end, we chose 8 items for Experiencing God’s Grace (F-1). These included GS-3, GS-31, and GS-37; TAGS-1, TAGS-6 and TAGS-13; they also included RGS-1 and RGS-6. Items for Costly Grace (F-2) included RGS-18, RGS-14, RGS-19, RGS-22, RGS-23, and RGS-21. Items for Grace to Self (F-3) included all seven items loading on this factor, as did items selected for Gracelessness from Others (F-4). Finally, we chose seven items for Grace to Others (F-5), including all of the seven items loading on this factor: RGS-24, RGS-25, and RGS-27, along with GS-8, GS-24, GS-25, and GS-26.

Adverse Childhood Experiences: Further Analysis

In this sample 69.1% of participants reported zero (47.8%) or one (21.3%) adverse childhood experience. Among the remaining participants 7.5% reported 2, 5.8% reported 3, 7.3% reported 4 and 7.6% reported 5 or more adverse experiences. Because Grace from Others (F-4) in part mirrors childhood adversity, we performed an analysis of variance to further examine the relationship of adversity scores to scores on Grace from Others. Results showed a significant main effect for adversity ($F_{5, 446} = 18.82; p < .001$). Post hoc Scheffe tests showed that those who reported 3 or 5 adverse experiences scored lower on the Grace from Others (F-4) dimension than those reporting 0, 1 or 2 such experiences. Those who reported 4 adverse experiences scored lower on Grace from Other than those with zero or one such experience, but did not differ from the other two groups.

Phase 4: Regressions. First, the proposed five Dimensions of Grace items were scored for the present sample. Then the degree to which each grace dimension was predicted by a simultaneous entry linear combination of the other four was computed. All these analyses produced significant effects. The total variance accounted for ranged from 6-38%.

Experiencing God's Grace was significantly predicted by each of the other grace factors except Grace from Others. Together they accounted for 27% of the variance on Experiencing God's Grace.

Costly Grace was significantly predicted by all four of the other grace factors. Together they accounted for 38% of the variance on this factor.

Grace to Self was significantly predicted by each of the other four grace factors. However, together they accounted for only 6% of the variance on Grace to Self.

Grace from Others was significantly predicted by Costly Grace and Grace to Self. Together these accounted for 12% of the variance on Grace from Others. Experiencing God's Grace and Grace from Others did not contribute significantly to this regression.

Finally, Grace to Others was significantly predicted by each of the other factors except Grace from Others. Together they predicted 27% of the Grace to Others variance.

Next a series of regressions were computed for our dependent measures and the single-item measures of self-reported Religious Knowledge and Life Satisfaction; again the question was whether the various dimensions of grace contributed significant independent variance. Thus in these analyses all five dimensions of grace were regressed simultaneously on each of the dependent measures and on the single-item measures of Religious Knowledge and Life Satisfaction.

Results indicated that Experiencing God's Grace significantly predicted scores on the Brief R-COPE Negative, Brief R-COPE Positive, GQ-6, Spiritual Well-Being and both the RWB and EWB subscales. However, it did not predict scores on the ISS, the ACORN, or the ACE. Experiencing God's Grace also significantly predicted self-reported Religious Knowledge and Life Satisfaction.

Costly Grace significantly predicted scores on the ACE, the Brief R-COPE Negative, GQ-6, the ISS, SWB and RWB. It did significantly predict scores on the ACORN, Brief R-COPE Positive, or EWB, and did not predict self-reported Religious Knowledge and Life Satisfaction.

Grace to Self significantly predicted scores on the ACE, the ACORN, the Brief R-COPE Negative, Brief R-COPE Positive, ISS, SWB and EWB but not RWB or GS=Q-6. Grace to Self also significantly predicted self-reported Religious Knowledge and Life Satisfaction.

Grace from Others significantly predicted scores only on the ACE, ACORN, Brief R-COPE Negative, GQ-6, ISS, and EWB but not RWB or SWB and not Brief R-COPE Positive. Grace from others also predicted self-reported Life Satisfaction, but not Religious Knowledge.

Grace to Others significantly predicted scores on the ACORN, Brief R-COPE Negative, ISS, SWB and EWB but not RWB, ACE, Brief R-COPE Positive or GQ-6. Grace to others also predicted self-reported Religious Knowledge, but not Life Satisfaction.

Discussion for Study One

Results of study one yielded five factors: Experiencing God's Grace, Costly Grace, Grace to Self, Grace from Others and Grace to Others. Scales based on the five factors showed adequate to good internal consistency and generally expected correlations with religion/spirituality measures and psychological variables. Skew and Kurtosis was found on the first two factor-based scales and the item pool was large, especially for the first factor. A thirty-six item Dimensions of Grace scale was proposed that selected items that minimized skew and kurtosis. Regression analyses suggested that while related to each other, the five dimensions of grace were sufficiently independent of each other to warrant using as distinct scales.

STUDY TWO

The purpose of study two was to explore whether the factor structure of the Dimensions of Grace Scale could be replicated across samples, and, if warranted to further explore concurrent validity for the five subscales. We contemplated performing a confirmatory factor analysis for the Dimensions of Grace items. However, confirmatory factor analysis requires a clear theory about the expected results or a sufficient body of data to establish that particular items are expected to load on specific factors. Theoretical understanding of grace is limited and only one prior exploration of the grace factor structure has been performed for these items.

Indeed, apart from that study, the Dimensions of Grace Scale has not so far been used. Thus we performed an exploratory factor analysis on a second sample to which the three grace scales had all been administered in order to provide preliminary assessment of the generality of the factor structure of the Dimensions of Grace Scale.

Participants

The data for this factor study were taken from a sample of 301 participants, comprised of the sample reported by Bufford et al. (2015) and a second group of participants gathered about that time and using the same procedures that had not been included by Bufford et al.. Participants were a mix of college and graduate students. They ranged in age from 17 to 59 with a mean age of 21.31 (SD = 5.31). Thirty percent were male and 69.8% female, with data missing for three. Ethnically, 82% were Caucasian, 7.9% African-American, 4.9% Hispanic, .8% Native American, and 3.3% other or missing. In terms of education, 84.5% were college students and the remaining 15.5% graduate students. In terms of religion/spirituality, 90.2% described themselves as Christian.

Methods

In addition to a demographic questionnaire, participants completed the Grace Scale, the Richmond Grace Scale, and The Amazing Grace Scale as predictor variables. They completed the Adverse Childhood Experiences Questionnaire (ACE), ACORN, the Brief RCOPE, Gratitude Questionnaire-6, the Internalized Shame Scale, and the Spiritual Well-being Scale as dependent or criterion variables. Methods are more fully described in Bufford et al. (2015).

Results

Preliminary exploratory analysis yielded eight factors with eigenvalues greater than 1.0. In order, eigenvalues were 9.03, 3.41, 3.06, 2.25, and 1.99. The percent of variance accounted for

was 25.08, 9.48, 8.51, 6.24, and 5.53 respectively (total = 54.84%). A scree plot suggested between two and five factors with five seeming most likely. Forced solutions with two, three, four, and five factors were performed. Preliminary analyses of the resulting structure matrices suggested that the five-factor solution was best; it loaded all items and had only one item (RGS-3: *I am able to forgive others when they hurt me*) that cross-loaded on two factors. Interestingly, the manifest content of this item fits better with the Grace to Others factor but loaded most strongly on Experiencing God's Grace in both Study One and Study Two.

Further exploration of the resulting factor solution showed that, aside from RGS-3, the factors and factor loadings from Study One were replicated with these new data. However, one striking discrepancy was discovered: the orderings of the factors was changed. The Grace from Others factor moved from fourth to second; the Costly Grace, and Grace to Self factors each moved down one step to take third, and fourth places respectively.

Descriptive Results. Descriptive results for Study Two, including coefficient alphas, means, standard deviations, skew and kurtosis for the five Dimensions of Grace subscales are reported in Appendix A. The same statistics for ACE, ACORN, Brief R-COPE, GQ-6, ISS and SSWB in Study Two are also reported in Appendix B.

Correlations. Pearson's correlations among the five dimensions of grace suggest that they are measuring relatively independent domains. They ranged from non-significant correlations with absolute values less than .12 to a high of .50. Correlations of the five Dimensions of Grace factors with dependent measures ranged from absolute values less than .12 to a high of .72. These results are reported in Appendix C.

Regressions. First, the degree to which each grace dimension was predicted by a simultaneous entry linear combination of the other four was computed. All these analyses

produced significant effects. The total variance accounted for ranged from 6-38%. These results are presented in Appendix D.

Experiencing God's Grace was significantly predicted by each of the other grace factors except Grace from Others. Together they accounted for 27% of the variance on Experiencing God's Grace.

Costly Grace was significantly predicted by all four of the other grace factors. Together they accounted for 38% of the variance on this factor.

Grace to Self was also significantly predicted by each of the other four grace factors. However, together they accounted for only 6% of the variance on Grace to Self.

Grace from Others was predicted significantly by both Costly Grace and Grace to Self. Together these accounted for 12% of the variance on Grace from Others. However, Experiencing God's Grace and Grace from Others did not contribute significantly to this regression.

Finally, Grace to Others was significantly predicted by each of the other factors except Grace from Others. Together they predicted 27% of the Grace to Others variance. Table 6 reports these results.

Next a series of simultaneous regressions were computed for our dependent measures; again the question was whether the various dimensions of grace contributed independent variance. Thus in this analysis all five dimensions of grace were regressed on each of the dependent measures.

Experiencing God's Grace significantly predicted scores on the Brief R-COPE Negative, Brief R-COPE Positive, Spiritual Well-Being and both the RWB and EWB subscales. Experiencing God's Grace also significantly predicted single-item measures of Life Satisfaction and Religious Knowledge. Experiencing God's Grace significantly predicted self-rated

Importance of Religion and Spiritual Maturity, two single-item measures not included in study one; none of the other subscales significantly predicted these two measures.

Costly Grace significantly predicted scores on the ACE, Brief R-COPE Negative, GQ-6, the ISS, SWB and both RWB and EWB. Grace to Self significantly predicted scores on the ACE, ACORN, Brief R-COPE Negative, Brief R-COPE Positive, ISS, SWB and EWB but not RWB. Grace to Self also significantly predicted Life Satisfaction.

Grace from Others significantly predicted scores only on the ACE and Brief R-COPE Negative. Finally, Grace to Others significantly predicted scores on the ACORN, Brief R-COPE Negative, GQ-6, and ISS. These regression results are reported in Table 7.

Study Two Discussion

Results of Study Two generally replicate those of Study One. The factor loadings of the Dimensions of Grace scale items from Study One generally replicated across the second sample. However, there were two minor exceptions. First, one item, RGS-3 (I am able to forgive others when they hurt me), loaded about equally on the Experiencing God's Grace and Grace to Others factors in this sample (.62 and .55 respectively) rather than loading exclusively on the Experiencing God's Grace factor. In some ways the verbal content of the item seems to fit better with Grace to Others. It may prove interesting to see how this item loads in future studies.

The second change for this sample is in the ordering of the factors. Experiencing God's Grace remains the first, factor. However, Grace from Others moved from the fourth to the second position and Costly Grace and Grace to Self each moved down one position in the factor ordering. Grace from Others remained in the final ordinal position.

As in Study One, regression analyses revealed two important features. First, at most the remaining four subscales accounted for about one third of the variance for any Dimensions of

Grace subscales. Second, both correlations and regressions showed that the subscales had distinctively different patterns of relationship with the various dependent measures used in the present study. Specifically, Experiencing God's Grace was significantly related to positive and negative religious coping and to existential, religious, and spiritual well-being. Costly Grace was significantly related to negative religious coping, gratitude, internalized shame, and to existential, religious, and spiritual well-being. Grace to self was significantly related to mental health symptoms, positive and negative religious coping, internalized shame, and to existential, religious, and spiritual well-being. Grace from others was only significantly related to psychological distress and negative religious coping. Finally, grace to others was significantly related to mental health symptoms, negative religious coping, gratitude, and internalized shame.

General Discussion

The construct of grace appears to be multidimensional, as evidenced by convergent and discriminant validity and by factor analysis in the current studies. In Study One, five factors were identified by factor analysis, including: Experiencing God's Grace, Costly Grace, Grace to Self, Grace from Others, and Grace to Others. These draw items from each of the original three measures of grace, though in differing proportions across the factors. Study Two replicated these findings. Results indicated that combining items from the three grace scales enables measuring more dimensions of the construct than any one of the three original measures. The Dimensions of Grace Scale may in turn contribute to clarification of the domain of grace as well as shed light on the view of grace in Christian—and other—religious traditions.

Taken together, results of these two studies suggest that a five dimensional model of grace is promising and each of the five dimensions contributes uniquely to relationships with other variables. Grace has shown significant relationships to a variety of dependent measures that

include social, psychological and religious/spiritual measures. Much remains to be learned, but these data provide a promising start.

We are encouraged by the strong factor replication. However, we suspect it may be more related to the similarity of the two samples (predominantly Christian college students) than to a robust generality of these results. Only further study with dissimilar samples can assess this.

Somewhat surprisingly, most of the dimensions tapped by the three grace measures consist of items that are negatively worded and thus in effect assess the opposites of grace—or gracelessness—of various forms. We had anticipated that positively and negatively worded items would load together; instead these items largely emerged on separate factors altogether. Moreover, divine grace is described in positive terms by these items, while humans are generally described in negative terms that connote their all too common lack of grace.

A somewhat different perspective on the five factors is related to the agents of grace. Experiencing God's Grace and Costly Grace primarily involve items with references to God and identify aspects of divine grace. They also tend to reflect distinctively Christian perspectives. We note, however, that human grace, too, is costly; in particular, grace to and from others involves cost to the giver that benefits the recipient. In contrast to the first two dimensions, grace to self, grace from others, and grace to others primarily identify human actions. None of these items have reference to God. Blackburn and colleagues have used the expression *enacted grace* to describe these forms of grace (Blackburn, et al., 2012). Sells and colleagues (Cook, 2013; Patrick et al., 2009; Sells et al., 2009) use the expression *relational grace*. Thus grace refers both to the relationship between humans and the divine and to aspects of that among humans.

Each of the five grace subscales proved to be related to several of the other dimensions. But only Costly Grace and Grace to Self showed significant loadings on each of the other subscales in our regressions.

One striking outcome was the discovery that Grace from Others had a moderately strong inverse relationship to self-reported adverse childhood experiences. Adverse childhood experiences accounted for about fifteen percent of the variance on grace from others. In contrast, though significantly related to costly grace and grace to self, childhood adversity did not account for more than four percent for either of these subscales. The finding that grace from others is significantly inversely related to childhood adversity makes sense, as all of the forms of adversity assessed by the ACE involve the harmful or neglectful actions of others.

Though each grace scale included items measuring the experience of God's grace, the absence of any items for at least one factor in each of the scales suggests that the three scales measure somewhat different constructs. This in turn suggests that the authors had somewhat different constructs of grace from which they began scale development. Upon further examination of item development, each measure utilized different "experts" to assist with item development (i.e., theologians, graduate students, etc.) and the different constructs may be illustrative of each group's understanding of grace. More specifically, all the items of the TAGS load on Experiencing God's Grace. In contrast, Bassett (2013) reported two factors for the TAGS. Thus our findings do not replicate Bassett's for the TAGS. Costly Grace consists exclusively of RGS items. All but one item in Grace to Self and Grace from Others are GS items. Together, these findings suggest that the authors of the three grace measure were actually assessing different aspects of grace and likely began with different grace constructs in mind.

Another possible factor in item clustering is the use of negatively worded items.

All items on Costly Grace are negatively worded and sixteen of twenty-one items on Grace to Self, Grace from Others, and Grace to Others are also negatively worded. Could response bias, such as nay-saying, be a significant element influencing factor loading? We do not know, but seeking positively-worded items that load on these factors may shed light on this question. Exploration of the relationship of the grace scales to social desirability also may be illuminating. Still, our preliminary conclusion is that human interactions are so commonly marked by the absence of grace that the authors of the three grace measures tended to think in these terms. Table 8 provides an overview of the grace measures and related constructs as suggested by our findings.

For the next steps in grace research, we propose a thirty-six item Dimensions of Grace Scale. It combines items from all three grace measures and includes seven items for each of the other five dimensions of grace and one extra item for Experiencing God's Grace. Experiencing God's Grace loaded the majority of the items from the three measures, so choosing items proved difficult. Exploration of the additional items seems a needed step. We have begun development of a prospective item list. Items from the Sells et al. (2009) relational grace measure may also prove fruitful; at minimum we want to explore how they fit with our model. We hope to be able to choose the best five items to measure each factor following this phase of research and thus have a shorter but effective grace measure.

Continued work on the psychometric support for the grace measure is needed. We found no re-test date for any of the grace measures; these data are needed. While we think of grace as more a trait than a state, we also suspect that it may vary over time. Exploration of the grace subscales with new samples more diverse in terms of age, race, education, religious/spiritual

background, and socio-economic circumstances is needed. Exploring differences in grace among various groups may shed light on possible factors that contribute to human acts of grace.

Future study should also explore the network of connections between grace and other related constructs. Path analysis may be particularly valuable in identifying that place of grace in the broader context of religion and spirituality. Future research may also productively explore ways in which human grace can be enhanced. Priming and various instructional approaches may prove helpful, but they may need to be accompanied by the experience of grace in its various forms. Path analysis may prove fruitful in better understanding the links between grace and its antecedents and results.

We wonder if there may be yet-untapped aspects of grace that none of the three grace measures addressed. Much as concepts of intelligence remained in flux for many years following the initial successful efforts to measure intelligence, we anticipate there will be additional and continuous refinement in our constructs of grace in the coming years. There may also be continued debate about both the construct of grace and related grace measures. We expect that further research and discussions will help both researchers and clinicians better understand and clarify the theological and relational constructs of grace. This is an important work given the broad cultural significance of grace, the central place of grace in Christian theology, and the potential impact of grace in psychological and social functioning.

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Table 1

Measures of Grace: Concepts and Operations

Name	Concept	Scale Description	Reliability	References
Grace Scale	Experience and expression of grace; the aim was to broadly capture both divine and human grace	40 items, several negatively worded; a 7-point continuum from Strongly Disagree to Strongly Agree.	Alpha = .79 - .83	Payton et al (2000); Spradlin (2002); Spradlin et al (2012)
Global Relational Attitudes Conflict Exam (Grace)	Grace is the healing balm that can repair damaged relationships	10 items that assess two aspects of relational grace: taking and receiving grace; initially Yes/No, now 4-point Likert continuum from Strongly Disagree to Strongly Agree.	Alpha = .82 (Cook, 2013)	Beckenbach et al (2010) Cook (2013) Patrick et al (2013)
Richmont Grace Scale	Enacted grace or graciousness; the emphasis is on human responses to divine grace.	27 items, a few negatively worded	Alpha = .94	Blackburn et al (2012); Sisemore et al (2006); Sisemore et al (2011); Watson et al (2011)
The Amazing Grace Scale	Divine grace, including identification of and awareness of grace; the focus is on God's gracious deeds.	16 items, all positively worded	Alpha = .97	Bassett (2013); Bassett et al (2012)

Table 2**Internal Consistency and Descriptive Results for Grace Scales, Factor-based Scales, and Convergent and Discriminant Validity Measures for Study 1**

Scale	Alpha	Mean	SD	Skew	Kurtosis
Grace Scale (40 items)	.79	4.56 [@]	0.52 [@]	-0.21	-0.21
Richmont Grace Scale (27 items)	.94	5.44 [@]	0.87 [@]	-0.63	-0.39
The Amazing Grace Scale (16 items)	.97	5.55 [@]	1.24 [@]	-1.14	1.20
Factor 1	.98	5.60	1.12	-1.27	1.65
Factor 2	.94	5.87	1.15	-1.28	1.45
Factor 3	.76	3.20	0.95	0.11	-0.21
Factor 4	.84	5.32	1.29	-0.66	-0.34
Factor 5	.71	4.42	1.00	-0.07	-0.43
Spiritual Well-Being	.94	95.35	15.04	-0.68	0.12
Religious Well-Being	.94	45.15	8.28	-0.96	0.58
Existential Well-being	.89	49.85	8.95	-0.58	0.12
GQ-6	.83	36.08	6.25	-1.55	3.44
Brief R-COPE					
R-COPE Positive	.92	20.20	5.62	-0.52	0.12
R-COPE Negative	.87	11.71	4.56	1.33	0.11
Internalized Shame	.96	100.03	32.96	0.47	0.12
ACE	.77	1.41	1.97	1.65	2.25
Grace Scale (40 items)	.79	4.56 [@]	0.52 [@]	-0.21	-0.21

[@]Mean item scores and SDs are reported for grace measures to facilitate comparison of item responses among grace scales.

Table 3**Grace Item Factor Loadings**

Item\Factor	Factor-1	Factor-2	Factor-3	Factor-4	Factor-5
TAGS-12	.882	-.305	-.014	-.200	-.061
TAGS-15	.881	-.335	-.074	-.221	-.097
TAGS-10	.881	-.379	.047	-.171	-.071
TAGS-11	.854	-.393	.008	-.200	-.105
RGS-2	.853	-.325	-.015	-.205	-.108
TAGS-8	.852	-.415	.145	-.259	-.123
RGS-9	.850	-.374	-.005	-.117	-.233
TAGS-7	.848	-.361	-.015	-.287	-.101
TAGS-14	.847	-.251	-.068	-.283	-.052
TAGS-13	.841	-.261	-.092	-.262	-.034
TAGS-6	.834	-.261	-.107	-.241	-.089
TAGS-2	.829	.327	.014	.068	-.123
RGS-4	.824	-.354	.012	-.094	-.303
TAGS-16	.822	-.333	-.099	-.202	-.107
TAGS-4	.796	-.404	.013	-.160	-.089
GS-3	.779	-.304	.004	-.137	-.092
RGS-1	.775	-.483	.018	-.129	-.342
RGS-7	.762	-.371	-.207	-.138	-.135

Table Continues

Table 3 Continued**Grace Item Factor Loadings**

Item\Factor	Factor-1	Factor-2	Factor-3	Factor-4	Factor-5
TAGS-9	.760	-.298	.295	-.167	-.037
TAGS-1	.754	-.302	.018	-.084	-.179
GS-1	.749	-.384	.069	-.119	-.017
RGS-6	.746	-.363	-.093	-.141	-.428
RGS-8	.699	-.450	-.093	-.210	-.241
TAGS-3	.690	-.259	-.207	-.102	-.085
TAGS-5	.672	-.186	.042	-.149	-.046
GS-20	.666	-.387	-.065	-.231	-.053
GS-31	.643	-.221	-.103	-.110	-.100
GS-37	.599	-.213	-.163	-.136	-.127
GS-18	.589	-.279	-.083	-.177	-.086
RGS-12	-.347	.869	-.240	.202	.184
RGS-18	-.414	.855	-.161	.077	.283
RGS-14	-.330	.827	-.188	.197	.163
RGS-15	-.372	.815	-.241	.135	.178
RGS-11	-.307	.799	-.103	.125	.206
RGS-10	-.367	.776	-.125	.145	.248
RGS-16	-.351	.720	.034	.236	.268

Table Continues

Table 3 Continued**Grace Item Factor Loadings**

Item\Factor	Factor-1	Factor-2	Factor-3	Factor-4	Factor-5
RGS-19	-.381	.717	-.127	.137	.143
RGS-22	-.200	.708	.045	.076	.269
RGS-23	-.264	.701	.090	.214	.300
RGS-13	-.256	.680	-.195	.109	.039
RGS-21	-.311	.635	.212	.210	.349
GS-14	.037	-.120	.688	.044	.081
GS-10	.036	-.130	.665	.081	.237
GS-32	-.003	.193	-.652	-.036	.009
RGS-5	.324	-.151	-.610	-.182	-.185
GS-39	.015	.186	-.556	.051	-.049
GS-33	-.050	.107	-.556	.052	.124
GS-11	-.123	.076	.477	.231	-.003
GS-38	-.232	.149	.109	.790	.141
GS-23	-.145	.086	.040	.777	.095
GS-22	-.198	.119	.078	.768	.003
GS-5	-.137	.141	.067	.688	.181
GS-8	-.074	.215	-.108	.639	.152
GS-13	.349	-.324	-.041	-.585	-.069

Table Continues

Table 3 Continued**Grace Item Factor Loadings**

Item\Factor	Factor-1	Factor-2	Factor-3	Factor-4	Factor-5
GS-34	-.053	.223	.039	.547	.209
RGS-27	-.368	.446	.028	.219	.763
RGS-24	-.364	.428	.103	.151	.666
RGS-25	-.307	.316	-.014	.066	.657
GS-25	-.328	.400	-.144	.346	.601
GS-8	-.063	.159	.021	.073	.592
GS-36	.024	.259	-.005	.017	.556
GS-24	.189	-.155	-.073	.102	-.457
GS-35	-.002	.043	.278	.193	.450
RGS-26	-.134	.311	.215	.067	.436

Table 4

Composition of Proposed 36-item Dimensions of Grace Measure

Factor 1 Experiencing God’s Grace

<u>Loading</u>	<u>Skew</u>		<u>Item</u>
.847	-0.97	TAGS-6	Because of God’s work in my life I feel I have more self-control. My actions are more likely to be appropriate
.841	-0.87	TAGS-13	Because of God’s work in my life I feel I have more self-control. My emotions are more likely to be appropriate.
.775	-1.10	RGS-1	My beliefs about grace encourage me to be forgiving of others.
.754	-0.82	TAGS-1	God is in the process of making me more like Jesus.
.746	-0.84	RGS-6	Because of grace bestowed to me, I am able to forgive others.
.643	-0.68	GS-31	Sometimes when I pray for something I really want, I find that I end up with something even better.
.599	-0.84	GS-37	I strive to do good because of God’s acceptance of me not in order to earn His love.
.561	-0.92	RGS-3	I am able to forgive others when they hurt me.

Factor 2 Costly Grace

<u>Loading</u>	<u>Skew</u>		<u>Item</u>
.869	-1.98	*RGS-12	My behavior does not matter since I’ve been forgiven.
.855	-1.38	*RGS-18	If I work harder, I need less grace.
.776	-1.15	*RGS-10	Those who sin less than others require less grace.
.717	-1.25	*RGS-19	God cares more about what I do than who I am.
.708	-0.65	*RGS-22	The harder I work, the more I earn God’s favor.
.701	-0.68	*RGS-23	The more obedient I am, the more God loves me.
.635	-0.46	*RGS-21	I must work hard to experience God’s grace and forgiveness.

Table Continues

Table 4 Continued**Composition of Proposed 36-item Grace Measure****Factor 3 Grace to Self**

Loading	Skew	Item
.688	1.17	*GS-14 I tend to be hard on myself.
.665	0.69	*GS-10 I tend to dwell on my faults.
.652	-0.59	GS-32 I seldom feel shame.
.610	0.26	RGS-5 I accept my shortcomings.
.556	-0.87	GS-39 When I do something wrong I just can easily forget it.
.556	-0.50	GS-33 I seldom get very upset with myself when others are angry with me.
.477	0.34	*GS-11 I find it hard to accept help or gifts from others.

Factor 4 Grace from Others

Loading	Skew	Item
.790	-0.49	*GS-38 My parents always remember my mistakes.
.777	-0.78	*GS-23 One of my parents could stay mad at me for days sometimes.
.768	1.00	*GS-22 My mother or father keeps bringing up my past failures.
.688	-0.59	*GS-5 As a child one parent tended to withhold love when I misbehaved.
.639	-0.92	*GS-28 My Dad seldom said thank you.
.585	1.99	GS-13 As a child I was confident that at least one of my parents loved me no matter what.
.547	-0.59	*GS-34 As a child, one of my parents often used the “silent treatment” with me when upset with me.

Table Continues

Table 4 Continued**Composition of Proposed 36-item Grace Measure****Factor 5 Grace to Others**

Loading	Skew		Item
.763	-0.39	*RGS-27	Others must earn my forgiveness.
.666	-0.13	*RGS-24	I need to see remorse before I offer forgiveness.
.657	0.22	*RGS-25	If someone wrongs me, they need to make it right.
.601	-0.90	*GS-25	I don't get mad at people, I get even.
.592	0.27	*GS-8	I generally give people what I get from them.
.556	0.10	*GS-36	People who do bad things deserve what they get.
.457	0.16	GS-24	When offended or harmed by others I generally find it easy to forgive them.

*Items are reverse scored.

Table 5
Correlations Among Grace Scales and Factors, and with Other Scales, and Age in Study One

Measure	GS	RGS	TAGS	F-1	F-2	F-3	F-4	F-5
GS				.63**	.49**	.39**	.66**	.61**
RGS	.69**			.75**	.88**	.09	.34**	.67**
TAGS	.69**	.68**		.97**	.44**	.06	.21**	.34**
Factor 2				.47**				
Factor 3				.09	-.07			
Factor 4				.24**	.27**	.05		
Factor 5				.38**	.49**	.08	.23**	
Predicted Positive Correlations								
Gratitude-6				.41**	.36**	.05	.25**	.26**
EWB				.39**	.27**	.31**	.26**	.28*
RWB				.72**	.44**	.10*	.13**	.23**
SWB				.63**	.40**	.25**	.24**	.35**
R-COPE Positive				.78**	.39**	-.01	.17**	.30**
Predicted Negative Correlations								
ACE				-.05	.14**	-.18**	-.39**	.04
ACORN				-.13**	.03	-.43**	-.20**	-.17**
Internalized Shame				-.20**	-.21**	-.54**	-.39**	-.27**
R-COPE Negative				-.08	-.32**	-.21**	-.20**	-.32**
Age	.07	.13**	.13**	.12*	.13**	-.06	-.02	.15**

Note: *N* ranged from 389 to 464.

Most correlations between grace factors and grace scales involve part-whole relationships as they share common item pools.

** $p < .01$, two-tailed

Table 6**Regressions of Other Dimensions of Grace on each Dimension of Grace in Study One**

	B	SE	Beta	t	Sig
Experiencing God's Grace ($R = .517$; $R^2 = .267$)					
Costly Grace	.384	.052	.377	7.42	< .001
Grace to Self	.117	.052	.099	2.25	.025
Grace from Others	.068	.041	.075	1.66	.097
Grace to Others	.193	.057	.169	3.40	.001
Costly Grace ($R = .615$; $R^2 = .379$)					
Experiencing God's Grace	.314	.042	.320	7.42	< .001
Grace to Self	.199	.046	.170	-4.29	< .001
Grace from Others	.134	.036	.152	3.37	< .001
Grace to Others	.383	.049	.341	7.89	< .001
Grace to Self ($R = .242$; $R^2 = .058$)					
Experiencing God's Grace	.106	.047	.127	2.25	.025
Costly Grace	-.221	.051	-.258	-4.29	< .001
Grace from Others	.090	.039	.119	2.34	.021
Grace to Others	.118	.055	.123	2.25	.031
Grace from Others ($R = .347$; $R^2 = .120$)					
Experiencing God's Grace	.101	.061	.091	1.66	.097
Costly Grace	.245	.066	.215	3.68	< .001
Grace to Self	.148	.064	.111	2.32	.021
Grace to Others	.125	.070	.098	1.77	.077
Grace to Others ($R = .530$; $R^2 = .274$)					
Experiencing God's Grace	.145	.043	.166	3.40	.001
Costly Grace	.351	.044	.394	7.89	< .001
Grace to Self	.098	.045	.094	2.16	.031
Grace from Others	.062	.035	.080	1.77	.077

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Table 7**Regressions of Dimensions of Grace on Dependent Measures in Study One**

	B	SD	Beta	t	Sig
ACORN (R = .509; R ² = .259)					
Experiencing God's Grace	-.023	.034	-.035	-.66	.509
Costly Grace	.032	.039	.048	.84	.404
Grace to Self	-.328	.037	-.418	-8.96	< .001
Grace from Others	-.090	.029	-.151	-3.13	.002
Grace to Others	-.102	.041	1.134	-2.49	.013
ACE (R = .501; R ² = .251)					
Experiencing God's Grace	-.151	.091	-0.084	-1.65	.100
Costly Grace	.501	.103	.274	4.93	< .001
Grace to Self	-.281	.098	-.130	-2.88	.004
Grace from Others	-.728	.075	-.454	-9.72	< .001
Grace to Others	.073	.107	.035	.68	.499
Brief R-COPE Negative (R = .457, R ² = .209)					
Experiencing God's Grace	.731	.208	.184	3.51	.001
Costly Grace	-1.044	.232	-.257	-4.51	< .001
Grace to Self	-1.049	.223	-.219	-4.71	< .001
Grace from Others	-.351	.171	-.099	-2.05	.041
Grace to Others	-1.084	.245	-.235	-4.43	< .001

Table Continues

Table 7 Continued**Regressions of Dimensions of Grace on Dependent Measures in Study One**

	B	SD	Beta	t	Sig
Brief R-COPE Positive (R = .787, R ² = .620)					
Experiencing God's Grace	3.941	.184	.788	21.48	< .001
Costly Grace	.106	.205	.021	.516	.606
Grace to Self	-.437	.197	-.072	-2.22	.027
Grace from Others	-.011	.152	-.002	-.07	.942
Grace to Others	-.131	.216	-.023	-.61	.544
GQ-6 (R = .467; R ² = .218)					
Experiencing God's Grace	1.547	.296	.274	5.228	< .001
Costly Grace	.783	.325	.138	2.41	.016
Grace to Self	.012	.313	.002	.04	.970
Grace from Others	.757	.240	.152	3.15	.002
Grace to Others	.463	.343	.072	1.35	.178
Internalized Shame Scale (R = .683; R ² = .467)					
Experiencing God's Grace	1.075	1.29	.037	.83	.406
Costly Grace	-4.593	1.291	-.154	-3.22	.001
Grace to Self	-18.493	1.371	-.526	-13.485	< .001
Grace from Others	-7.264	1.058	-.278	-6.87	< .001
Grace to Others	-4.207	1.509	-.124	-2.79	.006

Table Continues

Table 7 Continued**Regressions of Dimensions of Grace on Dependent Measures in Study One**

	B	SD	Beta	t	Sig
SWB ($R = .676$; $R^2 = .457$)					
Experiencing God's Grace	6.574	.594	.495	11.06	< .001
Costly Grace	1.678	.674	.122	2.49	.013
Grace to Self	3.116	.632	.197	4.93	< .001
Grace from Others	.933	.497	.077	1.88	.061
Grace to Others	1.442	.691	.095	2.09	.038
RWB ($R = .726$; $R^2 = .527$)					
Experiencing God's Grace	4.890	.303	.656	16.12	< .001
Costly Grace	.912	.340	.119	2.68	.008
Grace to Self	.329	.325	.037	1.01	.312
Grace from Others	-.182	.251	-.027	-.73	.469
Grace to Others	.261	.355	.030	.734	.464
EWB ($R = .519$; $R^2 = .270$)					
Experiencing God's Grace	1.714	.406	.217	4.22	< .001
Costly Grace	.832	.455	.103	1.83	.103
Grace to Self	2.583	.430	.274	6.00	< .001
Grace from Others	1.027	.336	.144	3.06	.002
Grace to Others	1.062	.473	.118	2.25	.025

Table Continues

Table 7 Continued**Regressions of Dimensions of Grace on Dependent Measures in Study One**

	B	SD	Beta	t	Sig
Religious Knowledge (R = .377; R ² = .142)					
Experiencing God's Grace	.248	.064	.292	3.91	< .001
Costly Grace	.086	.070	.072	1.22	.222
Grace to Self	.137	.067	.098	2.06	.040
Grace from Others	-.011	.052	-.010	-.21	.836
Grace to Others	.223	.074	.166	3.03	.003
Life Satisfaction (R = .363; R ² = .132)					
Experiencing God's Grace	.117	.057	.111	2.05	.042
Costly Grace	.019	.063	.018	.30	.764
Grace to Self	.296	.060	.237	4.94	< .001
Grace from Others	.120	.047	.128	2.57	.010
Grace to Others	.110	.066	.092	1.67	.096

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Table 8
Grace Scales, Grace Dimensions, and Proposed Related Grace Constructs and Item Sources

Form of Grace	Grace Concepts	Dimensions of Grace	Item Source
Special Grace	Saving grace Sustaining and Transforming grace	Experiencing God’s Grace	GS
			RGS
			TAGS
	New creation [mainly Christian]	Costly Grace	RGS
Common Grace	Religion/Spirituality	Costly Grace	RGS
	Meaning and purpose	Grace to Self	GS
	Social support	Grace from Others	GS
	Natural resources	Grace to Others	GS

GS = Grace Scale (Spradlin, 2002; Bufford at al., 2015)

RGS = Richmond Grace Scale (Sisemore at al., 2011)

TAGS = The Amazing Grace Scale (Bassett, 2013)

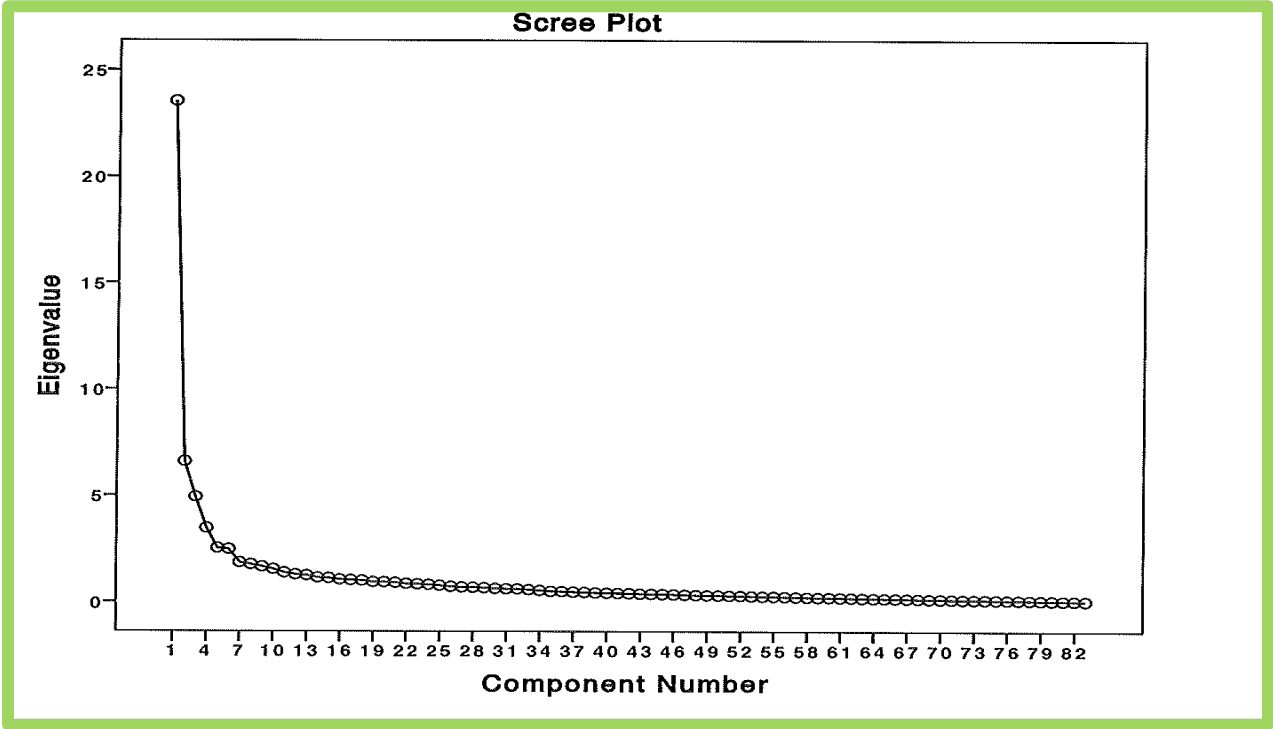


Figure 1
Scree Plot for Grace Measures in Study One