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Measuring Grace

Rodger K. Bufford

George Fox University, rbufford@georgefox.edu

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Measuring Grace

Division 36, APA – 2014

In Sisemore, Bufford, and Emmons, (August, 2014).
Investigating Grace. Discussion session presented at the
Division 36 hospitality suite at the annual meeting of the
American Psychological Association, Washington, DC.

Rodger K. Bufford
Graduate Department of Clinical Psychology
George Fox University

Study 1: Measuring Grace (2013)

Methods

- Participants – 152
 - Gender
 - 110 Female (73%)
 - 41 Male (27%)
 - Race
 - 126 Caucasian (83%)
 - 17 African-American (11%)
 - Other 4 (2.6%)
 - No response 5 (3.4%)
- Religion
 - 126 Christian (88%)
 - 6 No religion (4%)
 - 3 Agnostic (2%)
 - 2 Other (1.4%)
- Dawkins Atheism
 - 94 (62%) “I know God exists”
 - 38 (25%) “I strongly believe God exists”
 - 17 (12%) other

Study 1 (2013): Materials

Demographic Questionnaire

Grace Measures

- **Grace Scale** (Payton, Spradlin, & Bufford, 2000; Spradlin, 2002). Alpha in this study was .73
- **The Richmond Grace Scale (RGS)**. (Blackburn, Sisemore, Smith, & Re, 2012; Sisemore, et al 2011; Watson, Chen & Sisemore, 2011). Alpha in this study was .93.
- **The Amazing Grace Scale (TAGS)**. (Bassett, Felinski, et al, 2012). Alpha in this study was .97

Study 1: Criterion Measures

- **Spiritual Well-Being Scale (SWB)** (Ellison, 1982; Paloutzian & Ellison, 1981; Paloutzian, Bufford, & Wildman, 2012)..
- **Gratitude Questionnaire-6 (GQ-6)**. (McCullough, Emmons, & Tsang, 2002)
- **Brief R-COPE**. (Pargament, Koenig, & Perez, 2000; Pargament, Feuille, & Burdzy, 2011)
- **Internalized Shame Scale (ISS)**. (Cook, 1987)
- **ACORN Scale**. (Minami, Brown, McCulloch, & Bolstrom, 2010)
- **Adverse Childhood Experiences Scale (ACES)**. (Felittit, Anda et al, 1998).

Grace Scales: Descriptive Results

Study 1

| Scale | Items | Alpha | Mean Item Score | SD | Skew | Kurtosis |
|-------------------------|-------|-------|-----------------|------|-------|----------|
| Grace Scale | 40 | .73 | 4.57 | 0.49 | -0.28 | -0.60 |
| Richmont Grace Scale | 27 | .93 | 5.52 | 0.95 | -0.73 | -0.16 |
| The Amazing Grace Scale | 16 | .97 | 5.49 | 1.30 | -1.12 | 1.03 |

Correlations Among Grace Scales

Study 1

| Scale | Grace Scale | Richmont Grace Scale |
|-------------------------|-------------|----------------------|
| Richmont Grace Scale | .66** | |
| The Amazing Grace Scale | .55** | .65** |

Convergent & Discriminant Validity:

Correlations of Grace Scales with other measures

Study 1

| Measure | Grace Scale | Richmont Grace Scale | The Amazing Grace Scale |
|--------------------|-------------|----------------------|-------------------------|
| Internalized Shame | -.56** | -.32** | -.14 |
| EWB | .55* | .48** | .44** |
| RWB | .55 | .65** | .79** |
| SWB | .65** | .68** | .77* |
| Gratitude-6 | .38** | .42** | .38** |
| RCOPE + | .45** | .60** | .80** |
| RCOPE - | -.37** | -.32** | -.09 |
| ACE | -.24** | .17 | -.04 |
| ACORN | -.37** | -.09 | -.10 |
| Age | .11 | .18* | .16 |

Gender and Ethnicity

Study 1

Gender effects NS

Ethnic effects NS

Practical Concerns: Skew and Ceiling Effects--TAGS

Study 1

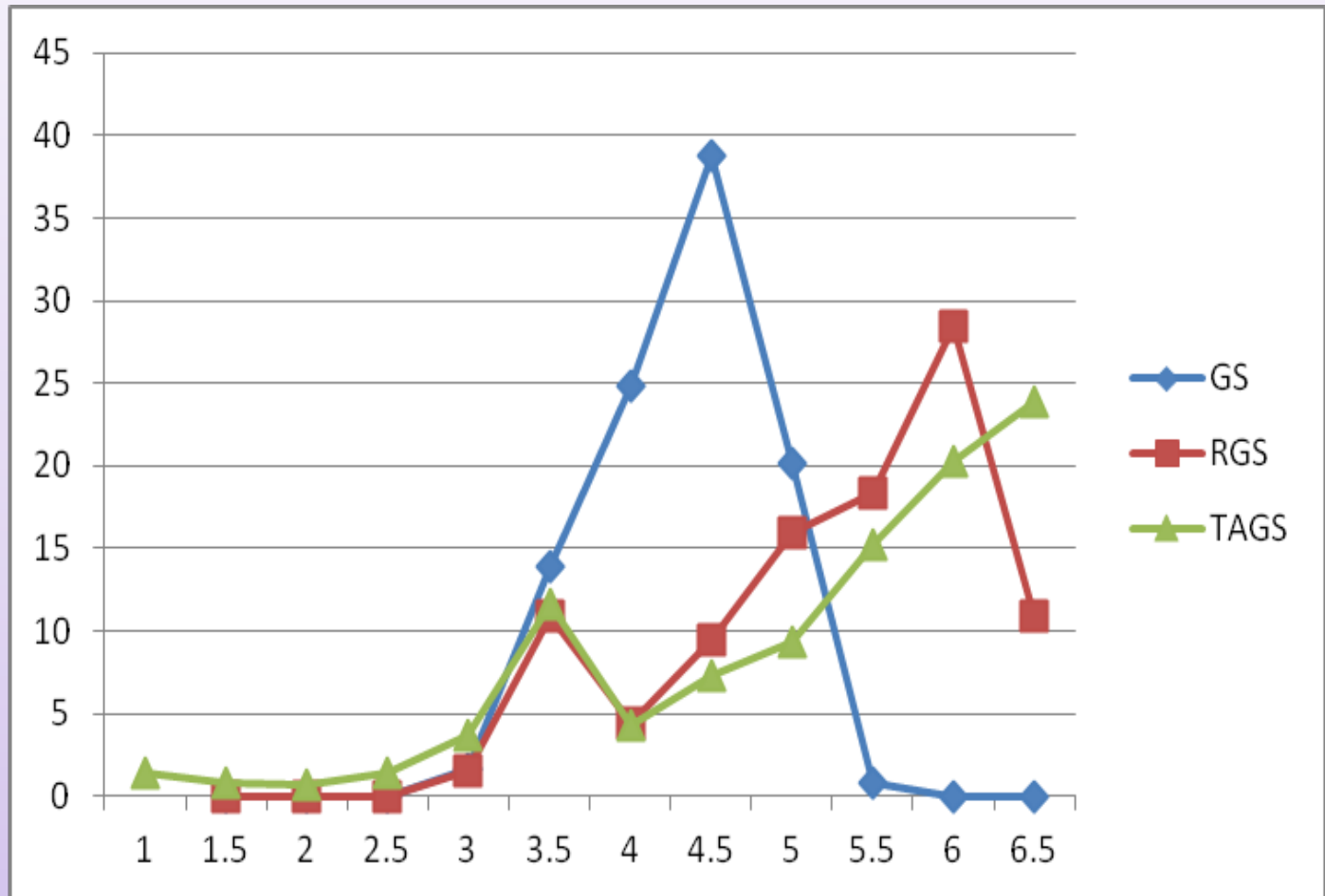
- ❑ For GS the highest mean item score observed was 5.55 on a 7 point scale
- ❑ For RGS 10% of participants obtained mean item scores ≥ 6.5 on a 7 point scale
- ❑ For the TAGS 23.9% of participants obtained mean item scores ≥ 6.5 on a 7 point scale

The TAGS may not be sensitive to interventions to increase TAGS scores

Mean Item Scores for the three Grace Measures

Study 1

Participants



Study 2: Combined Factor Analysis

Methods

- **Participants – 519**
 - Gender
 - Female 364 (70.1%)
 - Male 151 (29.1%)
 - Race
 - Caucasian 427 (82.3%)
 - African-American 46 (8.9%)
 - Asian 24 (4.6%)
 - Hispanic 26 (5.0%)
 - Native American 8 (1.5%)
 - No response 4 (0.8%)
- Religion
 - Christian 466 (89.8%)
 - Agnostic 13 (2.5%)
 - Atheist 2 (0.4%)
 - Hindu 1 (.02%)
 - Islamic 2 (0.4%)

Methods

Study 2 (2014)

Demographic Items

Grace Measures

- Grace Scale
- Richmond Grace Scale
- The Amazing Grace Scale

Criterion Measures

- Spiritual Well-Being Scale
- Gratitude Questionnaire-6
- Internalized Shame Scale
- Brief RCOPE
- Adverse Childhood Experiences Scale
- ACORN Scale

Grace Scales: Descriptive Results

Study 2

| Scale | Items | Alpha | Mean Item Score | SD | Skew | Kurtosis |
|-------------------------|-------|-------|-----------------|------|-------|----------|
| Grace Scale | 40 | .79 | 4.56 | 0.52 | -0.21 | -0.21 |
| Richmont Grace Scale | 27 | .94 | 5.44 | 0.87 | -0.63 | -0.39 |
| The Amazing Grace Scale | 16 | .97 | 5.55 | 1.24 | -1.14 | 1.20 |

Factor Results:

Study 2

The first stage of the factor analysis involved an exploratory analysis to identify all factors with eigenvalues greater than 1.0.

A total of 18 factors were identified.

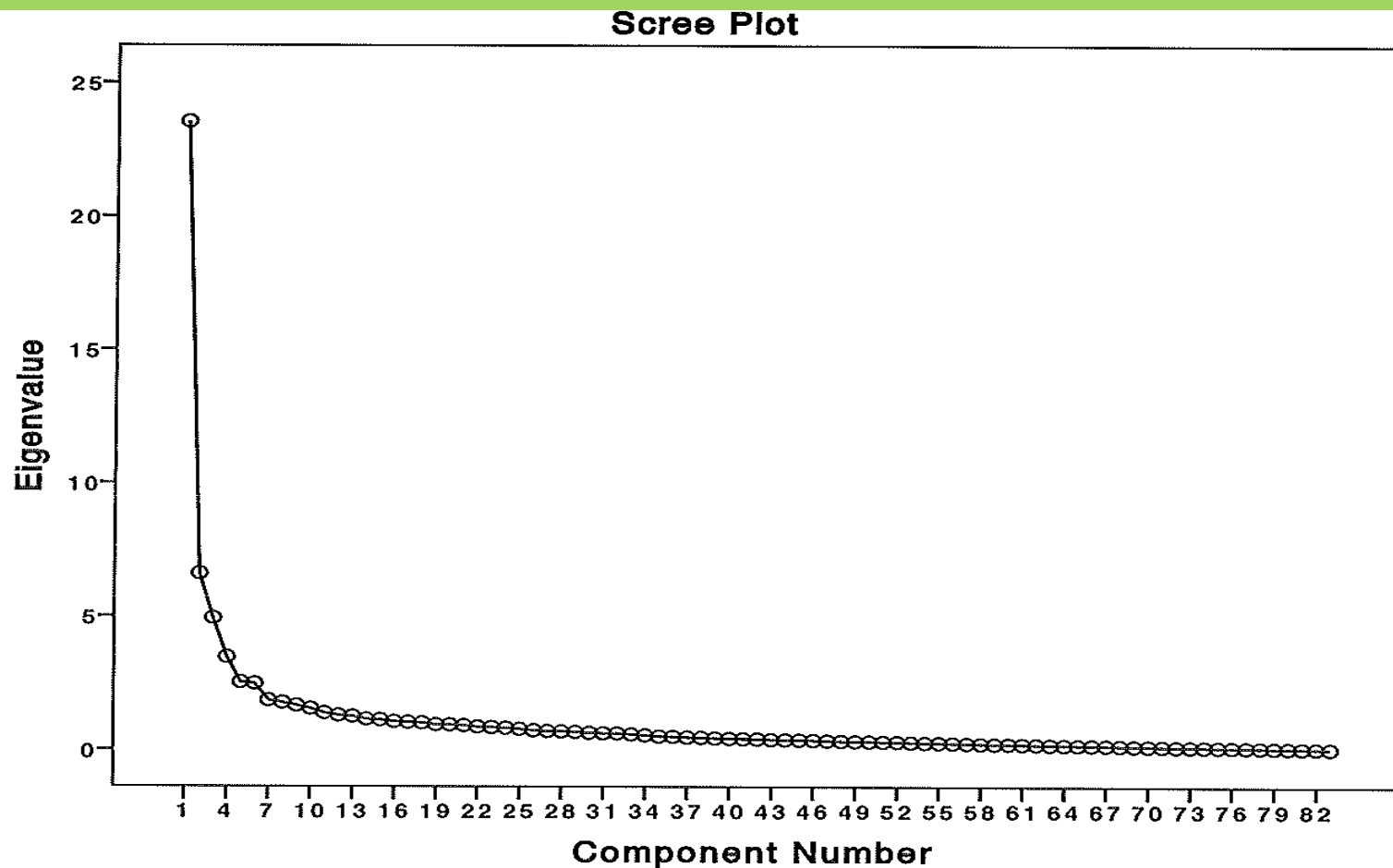
Eigenvalues in decreasing magnitude were: 25.55, 6.60, 4.94, 3.47, 2.53, 2.48, 1.85, 1.76, 1.66, 1.54, 1.38, 1.29, 1.15, 1.12, 1.05, 1.03, and 1.01

An Oblimin rotation was unsuccessful after 25 iterations.

A scree plot suggested a dominant initial factor and up to 4 or 5 additional factors

Grace Factors: Scree Plot

Study 2



Results: Factors

Study 2

Five-factor solution proved most satisfactory

Factor 1: Peace and Empowerment

Factor 2: Libertinism (“Cheap Grace”)

Factor 3: Shame and Guilt/Self-unforgiveness

Factor 4: Gracelessness of Others

Factor 5: Gracelessness of Self

Results: Forced Five Factor Solution

Study 2

| | Factor 1 | Factor 2 | Factor 3 | Factor 4 | Factor 5 |
|-------------|----------|----------|----------|----------|----------|
| 1 | TAGS-12 | RGS-12* | GS-14* | GS-38* | RGS-27* |
| 2 | TAGS-15 | RGS-18* | GS-10* | GS-23* | RGS-24* |
| 3 | TAGS-10 | RGS-14* | GS-32 | GS-22* | RGS-25* |
| 4 | TAGS-11 | RGS-15* | RGS-5 | GS-5* | GS-25* |
| 5 | RGS-2 | RGS-11* | GS-39 | GS-28* | GS-8* |
| 6 | TAGS-8 | RGS-10* | GS-33 | GS-13 | GS-36* |
| 7 | RGS-9 | RGS-16* | GS-11* | GS-34* | GS-24 |
| 8 | TAGS-7 | RGS-19* | | | GS-35* |
| 9 | TAGS-14 | RGS-22* | | | GS-19* |
| Total Items | 30 | 9 | 7 | 7 | 9 |

*Items reverse-scored so high scores indicate grace on all Factors

Results: Factor Items

Study 2

Factor 1: **Peace and Empowerment**

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

Results: Factor Items

Study 2

Factor 2: **Libertinism (“Cheap Grace”)**

- “Knowing God will forgive lets me do anything I want” (RGS-11)*

Note that all but Factor 1 describe the absence of grace—thus we reverse scored these scales

Results: Factor Items

Study 2

Factor 3: **Shame and Guilt/Self-unforgiveness**

- “I seldom feel shame” (GS-32)*
- “I accept my shortcomings” (RGS-5)*

Note that all but Factor 1 describe the absence of grace—thus we reverse scored these scales

Results: Factor Items

Study 2

- Factor 4: **Gracelessness of Others**

- “As a child I was confident that at least one of my parents loved me no matter what” (GS-13)
- “My mother or father keeps bringing up my past failures” (GS-22)*

Note that all but Factor 1 describe the absence of grace—thus we reverse scored these scales

Results: Factor Items

Study 2

Factor 5: **Gracelessness of Self**

- “Others must earn my forgiveness” (RGS-27; reverse-coded)*
- “When offended or harmed by others I generally find it easy to forgive them” (GS-24)

Note that all but Factor 1 describe the absence of grace—thus we reverse scored these scales

Grace Factor Descriptive Results

Study 2

| Scale | Items | Alpha | Mean Item Score | SD | Skew | Kurtosis |
|----------|-------|-------|-----------------|------|-------|----------|
| Factor 1 | 30 | .98 | 5.60 | 1.12 | -1.27 | 1.65 |
| Factor 2 | 12 | .94 | 5.87 | 1.15 | -1.28 | 1.45 |
| Factor 3 | 7 | .76 | 3.20 | 0.95 | 0.11 | -0.21 |
| Factor 4 | 7 | .84 | 5.32 | 1.29 | -0.66 | -0.34 |
| Factor 5 | 9 | .71 | 4.42 | 1.00 | -0.07 | -0.43 |

Results: Factor Correlations

Study 2

| | Factor 1 | Factor 2 | Factor 3 | Factor 4 | Factor 5 |
|----------|----------|----------|----------|----------|----------|
| Factor 1 | | | | | |
| Factor 2 | .47** | | | | |
| Factor 3 | .09 | -.07 | | | |
| Factor 4 | .24** | .27** | .05 | | |
| Factor 5 | .38** | .49** | .08 | .23** | |

Convergent & Discriminant Validity:

Correlations of Grace Scales with other measures

Study 2

| Measure | Factor 1 | Factor 2 | Factor 3 | Factor 4 | Factor 5 |
|--------------------|----------|----------|----------|----------|----------|
| Internalized Shame | -.20** | -.21** | -.14** | -.39** | -.27** |
| EWB | .39** | .27** | .31** | .26** | .28** |
| RWB | .72** | .44** | .10 | .16** | .32** |
| SWB | .63** | .40** | .25** | .24** | .35** |
| Gratitude-6 | .41** | .36** | .05 | .25** | .26** |
| RCOPE + | .78** | .39** | -.01 | .17** | .30** |
| RCOPE - | -.08 | -.32** | -.21** | -.20** | -.32** |
| ACE | -.05 | .14** | -.18** | -.39** | .05 |
| ACORN | -.13** | .03 | -.43** | -.20** | -.17** |
| Age | .12** | .13** | -.06 | -.02 | .15** |

Summary and Conclusions

Studies 1 and 2

- Grace appears to be multidimensional
- Most of the dimensions assess the opposites of grace, or gracelessness, of various forms.
- We had anticipated that negatively worded items would load negatively on positive dimensions of grace rather than emerge as separate factors.
- All three grace scales include items that tap into the peace and empowerment dimension, but the three scales measure somewhat different constructs. This suggests that the authors had somewhat different constructs of grace from which they began scale development.

Summary and Conclusions

Studies 1 and 2

- ☐ Adequate internal consistency
- ☐ No evidence of gender or ethnic effects in Study 1
- ☐ Age is slightly related to grace
- ☐ Supportive concurrent validity
- ☐ 5 factors in sample 2
- ☐ Factor 3 was not correlated with the other factors--?
- ☐ Possible ceiling problems with TAGS, RGS, and Factors 1, 2
- ☐ Questions remain about the construct and adequacy of the operations
- ☐ Further analyses pending for Study 2

Results are generally encouraging

Summary and Conclusions

Studies 1 and 2

- Scales based on the five factors identified show encouraging promise of reliability and concurrent and divergent validity.
- Next steps include replicating the findings for the five grace scales in a new sample. Measuring grace in a more diverse sample in terms of age, race, education, religious/spiritual background, and socio-economic circumstances is also desirable.
- We propose a thirty-six item measure combining items from all three grace measures for further exploration
 - Seven items for each of the five dimensions of grace
 - An extra item for the peace and empowerment factor
 - We anticipate selecting the best five items to measure each factor following this phase of research.

Summary and Conclusions

Studies 1 and 2

- All the items of the TAGS load on Factor 1
- Factor 2 consists exclusively of RGS items
- All but one item in Factors 3 and 4 are GS items
- The authors of these measures may have somewhat different concepts of grace
- We suspect there may be ongoing disagreements about both the construct of grace and related grace measures for some time.
- Scales based on the five factors identified show encouraging promise of reliability and concurrent and divergent validity.

Summary and Conclusions

Studies 1 and 2

- An unexpected outcome is that the fourth factor, which taps the gracelessness of others, proved to have a moderately strong relationship to self-reported adverse childhood experiences. The ACE accounts for about fifteen percent of the variance on gracelessness of others, but not more than four percent for any of the other grace factors. This finding was unexpected in the sense that we did not anticipate that the grace measures would include a gracelessness of others dimension. However, that gracelessness of others is significantly 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.
- Next steps include replicating the findings for the five grace scales in a new sample. Measuring grace in a more diverse sample in terms of age, race, education, religious/spiritual background, and socio-economic circumstances is also desirable.

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