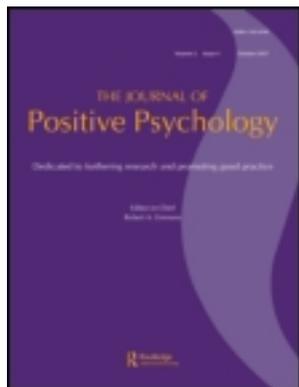


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### Grateful to God or just plain grateful? A comparison of religious and general gratitude

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## Grateful to God or just plain grateful? A comparison of religious and general gratitude

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Psychological science has consistently highlighted links between gratitude and religion, however mediating pathways by which religion relates to gratitude remain ambiguous. Further, it is unclear whether religious gratitude (e.g., gratitude to God) is more related to well-being than general gratitude. To address these gaps, we assessed for both religious and general dimensions of gratitude alongside measures of religious commitment and mental/physical well-being in a diverse sample of  $n = 405$  adult individuals. Consistent with previous research, gratitude was positively correlated with religious commitment ( $r = 0.45$ ,  $p < 0.001$ ). This relationship, however, was fully mediated by gratitude towards God. Using hierarchical linear regression, results further found that the interaction of religious commitment and religious gratitude added unique variance in predicting mental well-being, over and above general gratitude. This suggests that being grateful to God enhances the psychological benefits of gratitude in accordance with one's level of religious commitment.

**Keywords:** gratefulness; religion; spirituality; mental health

### Introduction

Over the past two decades, psychological science has turned its attention to the subject of gratitude, and it is now clear that gratitude serves a number of important psychological functions. Gratitude is associated with many positive outcomes such as general well-being, vitality, and happiness (McCullough, Emmons, & Tsang, 2002), positive affect and self-esteem (Kashdan, Uswatte, & Julian, 2006), life satisfaction (Wood, Joseph, & Maltby, 2008), prosocial and generous behavior (Bartlett & DeSteno, 2006; Tsang, 2006, 2007) and stronger interpersonal relationships (Algoe, Haidt, & Gable, 2008). A robust literature also suggests that gratitude protects against symptoms of mental illness; gratitude is associated with lower stress and depression over time (Wood, Maltby, Gillett, Linley, & Joseph, 2008), lower symptoms of posttraumatic stress disorder (Vernon, Dillon, & Steiner, 2009), and even less sleep latency and sleep-related daytime dysfunction (Wood, Joseph, Lloyd, & Atkins, 2009). Moreover, experimentally manipulated gratitude (e.g., writing down things for which one is grateful for) has been associated with positive impact on emotional functioning (Emmons & McCullough, 2003) and recent attempts to integrate gratitude exercises into clinical psychology interventions have produced improvements in affective and other symptoms (e.g.,

Rosmarin, Pargament, Pirutinsky, & Mahoney, 2010; Seligman, Rashid, & Parks, 2006).

However, one area of gratitude research that requires further study is its relationship with religion. Previous theory and research have highlighted that gratitude and religion are closely connected. Many world religions have emphasized the importance of gratitude in texts and rituals for literally millennia (Emmons & Crumpler, 2000; Emmons & Kneezel, 2005; Schimmel, 2004). Empirically speaking, gratitude is positively correlated with religious service attendance (Adler & Fagley, 2005), belief in Divine control (Watkins, Woodward, Stone, & Kolts, 2003), and spiritual transcendence (McCullough, Tsang, & Emmons, 2004), and many of these associations are relatively strong. Recent experimental research has also found increases of gratitude associated with prayer (Lambert, Fincham, Braithwaite, Graham, & Beach, 2009). On these bases, some have gone as far as to call gratitude a *sacred* or *spiritual* emotion (Emmons, 2005) suggesting that gratitude is uniquely enhanced by religion. However, it remains unclear *how* religion may augment the experience of gratitude. One possibility is as follows: several prominent definitions of gratitude postulate that this trait occurs exclusively in the context of perceiving benefit at the hands of an agent, such as a fellow human being or God (Emmons,

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2004; Peterson & Seligman, 2004). Religious commitment may thus facilitate the experience of gratitude through the perception of benevolent spiritual agency. Furthermore, any gratitude which is not explicitly interpersonal (i.e., being thankful to another human being) may be implicitly spiritual, in that it seems to imply the existence of spiritual entities (see Cohen, 2006 for a discussion). For example, receiving \$20 from a friend may induce gratitude regardless of one's spiritual persuasion, however finding \$20 on the street can only induce gratitude if it is perceived (explicitly or implicitly) that a non-corporeal agent, such as God, brought about this event. Religion may therefore enhance gratitude by through the mechanism of religious gratitude (i.e., by broadening its potential application to all positive life events). While a new body of research has found that gratitude towards God has positive effects on depression and stress, particularly among older Christian individuals (Krause, 2006, 2009; Krause & Ellison, 2009), inter-relationships between religion, religious gratitude, and general gratitude remain unclear.

More importantly, it is also unknown whether religious gratitude is more salient to well-being than general gratitude. While gratitude is clearly linked to religious life, gratitude has also been defined and conceptualized as a non-spiritual 'affective trait' (McCullough et al., 2002) or 'moral affect' (McCullough, Kirkpatrick, Emmons, & Larson, 2001). It is therefore quite possible that religious themes are simply a cultural presentation of gratitude, and that gratitude to God adds no value over and above general gratitude. If this were the case, we would expect that the tangible social and psychological benefits of gratitude are not enhanced by connection to religion or spirituality, such as gratitude towards God. However, it is also possible that religious gratitude may support and extend general gratitude in a manner that is more psychologically adaptive. We are not aware of any previous studies that have assessed for both religious and nonreligious dimensions of gratitude contemporaneously to facilitate a comparison of these constructs. Furthermore, most studies on religious gratitude have been with older individuals and almost all research has been done with Christians.

We therefore sought to examine religious and general dimensions of gratitude in a diversely religious sample across the adult lifespan. Our main questions were: (1) How are religion and gratitude related? What are the mediating mechanisms by which religion relates to greater gratitude? and (2) does religious gratitude have greater psychological benefits than general gratitude? We hypothesized that religious commitment would relate to general gratitude through the mechanism of religious gratitude. That is, we expected that the effects of religious commitment on gratitude would be mediated by gratitude towards God. We further

hypothesized that religious gratitude would remain a significant predictor of well-being after controlling for general gratitude, but that this effect would be specific to individuals with high levels of religious commitment.

## Method

### *Participants and procedure*

A total of  $n=405$  adults (aged 18 years or older) completed an on-line survey. In order to recruit a diverse sample, multiple methods of recruitment were utilized across two waves: (1) 140 community-dwelling individuals were recruited with the help of community organizations (e.g., synagogues, churches, learning centers), internet outlets (e.g., announcement groups, event listings, and discussion forums), and word of mouth (i.e., participants were asked to inform their friends and family members about the study to aid recruitment); (2) 265 university students were recruited via e-mail distributions facilitated through psychology departments, campus organizations, and word of mouth.<sup>1</sup> Response rates for each group are not available as the study was closed early due to recruitment of an adequate sample size in advance of what was expected. Demographics of the sample are presented in Table 1. Levels of belief in God were comparable to the US general population (Gallup Poll, 2008) in that 77.3% of the sample reported moderate or greater belief in God, 4.4% reported slight belief (e.g., past belief but not currently) and 3.0% reported no belief. Levels of importance of religion were slightly higher than in the general population (Gallup Poll, 2009); 71.4% reported that religion is very or moderately important in their lives whereas 13.6% of the sample reported that religion has slight importance (e.g., no engagement and no desire for increase) or no importance at all.

Participants completed an internet-based survey containing demographic items (age, gender, marital status, education and religious affiliation), measures of religiosity, happiness, satisfaction with life, positive/negative affect and physical/mental health, and measures of religious and general gratitude (described below). Given the similarities between the two gratitude measures, their order was randomly counter-balanced across subjects and interposed by the majority of the questionnaire. The general gratitude measure was completed before the religious gratitude measure by 49.4% of the sample, and the order was reversed for the remaining 50.6% of participants.

### *Measures*

#### *General gratitude*

General gratitude was measured using the 6-item Gratitude Questionnaire (GQ; McCullough et al.,

Table 1. Participant demographics ( $n = 405$ ).

Variable	Mean/frequency
Age	28.09 (14.64)
Gender (Female)	139 (65.7%)
Married	106 (26.2%)
College graduate	148 (36.7%)
Religious affiliation	
Jewish – Orthodox	101(24.9%)
Jewish – Non-Orthodox	47 (11.6%)
Christian – Protestant	91 (22.5%)
Christian – Catholic	36 (8.9%)
Other or None	130 (32.1%)

Note: Mean and standard deviation are presented for age; frequencies and proportion of sample size are presented for other variables.

2002), a reliable and validated self-report measure of the general disposition to experience gratitude. Items are not explicitly religious in phrasing (e.g., I have so much in life to be thankful for; If I had to list everything that I felt grateful for, it would be a very long list). The measure utilizes a 7-point Likert-type scale ranging from ‘strongly disagree’ to ‘strongly agree’ and higher scores indicate higher levels of gratitude. The GQ has previously demonstrated good psychometric properties (McCullough et al., 2002) and internal reliability in our sample was high ( $\alpha = 0.83$ ).

#### *Gratitude to God*

To measure religious gratitude, we adapted the GQ such that each item would refer specifically to God (e.g., I have so much in life to be thankful to God for; If I had to list everything that I felt grateful to God for, it would be a very long list). Anchors were left unchanged from the original measure. The resulting Religious Gratitude Questionnaire (RGQ) was internally consistent ( $\alpha = 0.83$ ) in the sample. Further, both a factor analysis (principal components) and a parallel analysis (O’Connor, 2000) suggested that all six items load on a single factor, accounting for 72.03% in scale variance.

#### *Religious commitment*

Many existing measures of religious commitment tend to use Christian idioms and phrasing (Rosmarin, Pargament, & Mahoney, 2009). As such, given the religious diversity within the sample, a multi-denominational measure of religious commitment was created consisting of five items assessing for the following dimensions: degree of belief in God; importance of religion in general; importance of religious identity; extent to which religious beliefs lie behind approach to life; and extent of carrying over religion into other

dealings in life. Items were reviewed by Jewish and Christian religious leaders and deemed to be culturally appropriate. All items were rated using a 5-point Likert-type scale ranging from ‘very’ to ‘not at all’ with higher scores indicating greater levels of general religiosity. Items were subjected to a principal components factor analysis (Direct Oblimin rotation) and all loaded highly ( $>0.80$ ) on single factor (eigenvalue  $> 3.58$ ) accounting for 72% of the variance. Consequently these items were summed to form a single internally consistent ( $\alpha = 0.90$ ) measure.

#### *Happiness*

Happiness was assessed using the 4-item Subjective Happiness Scale, a measure of global subjective happiness which boasts excellent psychometric properties from numerous studies around the world (SHS; Lyubomirsky & Lepper, 1999). Items are rated on a 7-point Likert-type scale and higher scale scores indicate greater levels of happiness. Internal consistency in the sample was high ( $\alpha = 0.89$ ).

#### *Satisfaction with life*

We utilized the 5-item Satisfaction with Life Scale (SWLS; Diener, Emmons, Larson, & Griffin, 1985) to assess for participants’ satisfaction with life as a whole. Participants rate the degree to which they agree/disagree with statements about their life (e.g., the conditions of my life are excellent) using a 7-point Likert-type scale ranging from ‘strongly disagree’ to ‘strongly agree’. Previous psychometric properties have been good and internal consistency in the sample was high ( $\alpha = 0.85$ ).

#### *Positive/negative affect*

We included the widely utilized Positive and Negative Affect subscales from the Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988). These two scales assess for the two most dominant dimensions of emotional experience. Participants rate the extent to which they have felt positive (e.g., active, alert) and negative (e.g., afraid, scared) emotions over the past few weeks on a 5-point Likert-type scale ranging from ‘very’ to ‘not at all’. The PANAS has consistently demonstrated excellent psychometric properties and internal consistency in the sample was high ( $\alpha = 0.88$  for both Positive and Negative subscales).

#### *Physical/mental health*

We assessed for physical and mental health with the 12-item Short-Form Health Survey (SF-12; Ware, Kosinsky, & Keller, 1995). Two summary scores measure physical (e.g., physical functioning, pain)

Table 2. Correlation matrix of study variables ( $n=405$ ).

	1	2	3	4	5	6	7	8	9
(1) Gratitude	–								
(2) Religious Gratitude	0.66**	–							
(3) Religiosity	0.45**	0.72**	–						
(4) SHS	0.52**	0.38**	0.25**	–					
(5) SWLS	0.49**	0.34**	0.16**	0.56**	–				
(6) PANAS-N	–0.36**	–0.24**	–0.18**	–0.50**	–0.42**	–			
(7) PANAS-P	0.51**	0.36**	0.21**	0.63**	0.52**	–0.35**	–		
(8) Physical health	0.07	0.03	0.07	0.02	0.15*	–0.01	0.20**	–	
(9) Mental health	0.37**	0.21**	0.10	0.56**	0.50**	–0.66**	0.51**	–0.11*	–
Mean	36.83	35.84	20.78	21.19	25.00	20.26	36.90	54.39	44.91
SD	5.24	7.40	4.86	4.74	6.43	6.86	6.67	7.90	9.49
Range	11–42	6–42	5–25	4–28	5–35	10–50	11–50	19–67	8–63

Note: \* $p < 0.01$ ; \*\* $p < 0.001$ .

and mental health (e.g., vitality, calmness, functional impairment due to depression) over the past four weeks. Scores range from 0 to 100 and are scaled based on American national norms, with lower scores indicating poorer health and functioning. This measure has previously demonstrated excellent psychometric properties (Gandek et al., 1998; Ware et al., 1996).

#### Analytic plan

Preliminary analyses were conducted to determine correlations between study variables. Next, to better explore the relationship between religion and gratitude, we conducted mediation analyses to determine whether the observed relationship between religious commitment and general gratitude was mediated by religious gratitude. We then utilized hierarchical multiple regression to compare relationships of religious and general gratitude with well-being, and to examine whether these relationships were moderated by religious commitment. Bonferroni correction was employed for multiple comparisons.

## Results

### Preliminary analyses

A correlation matrix of all study variables is presented in Table 2. General and religious gratitude were highly correlated ( $r=0.66$ ,  $p < 0.001$ ) and both were associated with religious commitment ( $r=0.45$  for general gratitude;  $r=0.72$  for religious gratitude,  $p < 0.001$ ). Both general and religious gratitude were correlated significantly with all other study variables in the expected directions ( $r$ s ranging from  $-0.36$  to  $0.52$ ,  $p < 0.001$ ) except for physical health, which was not significant. No biases due to counterbalancing were detected; general and religious gratitude scores were evenly distributed between both forms of the

questionnaire ( $t(403)=1.74$ ,  $p=0.08$  for RGQ;  $t(403)=1.22$ ,  $p=0.22$  for GQ).

### Religion and gratitude

To examine our first hypothesis that the relationship between religion and gratitude would be mediated by religious gratitude, we utilized the approach of Baron and Kenny (1986). Religious commitment was related to higher religious gratitude (Path a;  $\beta=0.72$ ,  $t=20.70$ ,  $p < 0.001$ ) and religious gratitude was related higher general gratitude (Path b;  $\beta=0.66$ ,  $t=17.64$ ,  $p < 0.001$ ). Although religious commitment was initially tied to general gratitude (Path c;  $\beta=0.45$ ,  $t=9.98$ ,  $p < 0.001$ ) this relationship was fully attenuated once religious gratitude was controlled for ( $\beta=-0.06$ ,  $t=1.10$ ,  $p=0.27$ ; Path c). Both a Sobel test ( $Z=11.05$ ,  $p < 0.001$ ) and a bias-corrected bootstrapping analysis of our mediation model (Preacher & Hays, 2008; 1000 sub-samples, 95% CI; Path a via Path b= $0.36-0.77$ ) supported these findings. The observed mediating effect was complete with a large effect size (ratio of indirect effect:  $Pm=1.13$ , 95% CI= $0.78$  through  $1.61$ ). Given the religious diversity of the sample, we examined whether religious affiliation moderated these findings; the mediation model was consistent for both Jewish and Christian participants ( $\Delta R^2=0.007$ ,  $p=0.18$ ). See Figure 1 for a graphical representation of our mediation model. It was also observed that religious commitment and religious gratitude combined explained a full 47% of the variance in general gratitude in our sample ( $R^2=0.47$ ,  $p < 0.001$ ). Given the similarity in item content between the general and religious gratitude measures, we conducted a reverse mediation analysis to determine whether general gratitude mediated the effect of religion on religious gratitude. A partial mediation effect was detected (i.e., the relationship

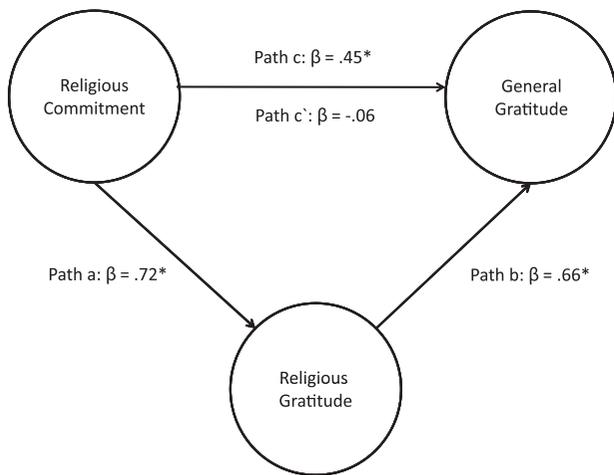


Figure 1. Relationship between religion and gratitude.  
Note: Values represent standardized regression coefficients.  
\* $p < 0.01$ .

between religious commitment and religious gratitude was partially attenuated once general gratitude was controlled for), though the size of this effect was small (ratio of indirect effect:  $Pm = 0.26$ , 95% CI = 0.19 through 0.35). This result raises the possibility that part of our observed mediation effect of religious gratitude on general gratitude may be due to operational confounds, though this is unlikely due to item overlap completely. On the whole, these findings highlight the salience of religious factors in gratitude. They further suggest that gratitude towards God may be a mediating mechanism by which religious commitment relates to gratitude.

### General versus religious gratitude

To compare the effects of religious and general gratitude on well-being, we conducted hierarchical regression analyses on each outcome variable (except for physical health which was not significant, see above). In each analysis, general gratitude was entered in step 1 and religious gratitude was entered in step 2. In order to examine whether religious commitment moderated the relationship of religious gratitude on well-being, we added two additional steps to our analyses using mean-subtracted (centered) variables (Aiken & West, 1991). Thus, religious commitment was entered in step 3, and the multiplicative interaction of religious gratitude and religious commitment was entered in step 4. *F*-tests were conducted to assess the significance of additional variance explained by the variables added in each step (Table 3).

General gratitude was a significant predictor of all outcome variables (Step 1;  $\beta$ s range from 0.36 to 0.52,  $p < 0.001$ ). In Step 2, the addition of religious gratitude did not significantly increase the variance

explained ( $\beta$ s range from  $-0.07$  to  $0.14$ ,  $p > 0.10$ ). However, the interaction between religious commitment and religious gratitude explained additional variance for all variables except for satisfaction with life (Step 4;  $\beta$ s range from  $0.13$  to  $0.28$ ,  $p$ 's range from  $0.04$  to  $< 0.001$ ). Beta weights for the final (interaction) model are presented in Table 4. These effects did not differ between Jewish and Christian participants for all outcomes ( $p > 0.20$ ). To further explore the nature of these interactions, follow-up tests probing the effects of religious gratitude above and beyond nonreligious gratitude at various levels of religiosity were conducted (Hayes & Matthes, 2009). Results indicated that among more religiously committed participants (1 SD above the mean), religious gratitude was a significant predictor of all well-being measures after controlling for general gratitude ( $\beta$ s range from  $0.22$  to  $0.40$ ,  $p$ s range from  $0.01$  to  $< 0.001$ ). Among average participants, results were mixed ( $\beta$ s range from  $0.13$  to  $0.20$ ,  $p$ s range from  $0.11$  to  $< 0.05$ ), while among less religious participants (1 SD below the mean) religious gratitude was unrelated to outcomes once general gratitude was controlled for ( $\beta$ s range from  $0.0005$  to  $0.09$ , all  $p$ s  $> 0.10$ ).

### Discussion

Previous research has identified important ties between gratitude and religion, however explanations for how and why religion relates to gratitude have been unclear. Consistent with the existing research base, religious commitment was strongly related to gratitude in this study. In fact, religious factors accounted for nearly 50% of the variance in gratitude. The present study further examined a potential explanatory mechanism by which religious commitment may relate to gratitude. We proposed that religion facilitates gratitude by promoting the perception of gratitude through a religious lens (i.e., religious gratitude). In this regard, a mediation model determined that the relationship between religious commitment and gratitude was fully mediated by religious gratitude with a large effect size. This finding may suggest that religion promotes gratitude by providing unique opportunities to experience this trait. Seemingly, gratitude to God can occur with the simple recognition of blessings in one's life (e.g., the capacity to walk) or even positive happenstance. By contrast, non-religious gratitude is constricted by the perception of physical agents, and thus can only occur in interpersonal contexts (e.g., receiving a gift or favor from another person). However, it is also possible that grateful individuals are more drawn to God and religious commitment. Just as gratitude motivates prosocial interpersonal connections (Tsang, 2006, 2007) it may similarly promote spiritual striving and religious connection seeking. It is also possible that

Table 3. Comparing general and religious general in predicting well-being.

	Step 1 General gratitude	Step 2 Religious gratitude	Step 3 Religious commitment	Step 4 Interaction
Happiness	0.27***	0.002	0.000	0.03***
Life satisfaction	0.24***	0.001	0.01*	0.002
Positive affect	0.26***	0.001	0.003	0.01*
Negative affect	0.13***	0.000	0.001	0.04***
Mental health	0.14***	0.002	0.004	0.03***

Note: \* $p < 0.05$ , \*\*\* $p < 0.001$ ; cells represent change in  $R^2$  for each step; step 4 tests interaction of religious commitment and religious gratitude.

Table 4. Final regression model (step 4): General and religious gratitude.

	General gratitude	Religious gratitude	Religious commitment	Interaction
Happiness	0.42***	0.07	0.21*	0.24***
Life satisfaction	0.44***	-0.12	0.18*	0.07
Positive affect	0.45***	-0.04	0.18*	0.13*
Negative affect	-0.29***	-0.12	-0.14*	-0.27***
Mental health	0.34***	-0.01	0.16	0.26***

Note: \* $p < 0.05$ , \*\*\* $p < 0.001$ ; cells represent  $\beta$  for each variable in step 4 of our model (interaction of religious commitment and religious gratitude).

religion acts as a proxy for the development of gratitude through emphasizing the importance of religious facets of this trait in both traditional teachings and ritual activity (e.g., prayers of thanks). To this end, it must be noted that the sample obtained was a self-selecting group, all measures were administered cross-sectionally and via the Internet, and no experimental manipulations of religious or general gratitude were employed. Further, the cross-sectional nature of the present study is not ideally suited to determine mechanisms of effect between these variables. Given the potentially complex interplay of myriad religious factors on gratitude, further research in this area using alternative measures (with a smaller degree of item overlap), more diverse and representative samples, and using more sophisticated methods of data analyses (e.g., structural equation modeling) are warranted. In particular, experimental studies involving how religious and general gratitude may impact perceptions of a chance positive event may be a fruitful area for future study.

A second question that previous literature has yet to address is whether religious gratitude adds any psychological benefit to that of general gratitude. In the present study, general gratitude was tied to greater happiness, life satisfaction, positive affect and mental health, and less negative affect, accounting for 13–27% of the variance in these variables. However, an interaction between religious commitment and religious gratitude (i.e., gratitude to God) accounted for

unique variance in well-being even once this effect was controlled for. Conversely, general gratitude remained significantly tied to well-being after controlling for this interaction. Taken together, these results highlight a nuanced relationship between religious and general dimensions of gratitude and psychological well-being. On the one hand, gratitude seems to be associated with well-being irrespective of religious themes. This suggests that regardless of whether gratitude has spiritual meaning, it is tied to better psychological functioning. On the other hand though, it appears that religious gratitude has an additional positive effect on well-being for individuals who are religiously committed. However, while the sample was not religiously monolithic, no participants reported Muslim or Hindu affiliation. While Jewish/Christian affiliation did not moderate any of the findings in this study (i.e., the mediation effect of religious gratitude on the relationship between religious commitment and gratitude, and the moderation effect of religious commitment on religious gratitude in predicting psychological well-being), it is possible that other religious cultures may uniquely facilitate religious or general gratitude and further research in other populations is warranted. Similarly, while levels of belief in God were similar to those of the US population as a whole, religious involvement was slightly higher than current national averages.

This study has implications for the burgeoning science of positive psychology clinical interventions.

While considerable experimental evidence now suggests that activities aimed at enhancing positive emotions, behaviors and cognitions can produce beneficial shifts in human affect over time (e.g., Burton & King, 2004; Emmons & McCullough, 2003; Lyubomirsky, Sheldon, & Schkade, 2005) more recent efforts have utilized such activities as in the context of clinical practice (Seligman et al., 2006) and initial meta-analytic findings in this area have been encouraging (Sin & Lyubomirsky, 2009). Furthermore, in a recent randomized controlled trial, a brief (2-week) spiritually-integrated treatment involving religious gratitude exercises produced dramatic decreases in stress, worry and depression in a large religious sample (Rosmarin et al., 2010). Given the robust effects of religious gratitude on emotional well-being within this study, future developments should consider the integration of explicit spiritual themes into gratitude interventions to facilitate emotion change when treating religious individuals. In the meantime, we are thankful to have completed this initial investigation highlighting points of convergence and divergence between being grateful to God and just plain grateful.

#### Note

1. Approximately 100 of the Christian students were provided with course credit for their participation. Other participants received no compensation.

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