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# A Gratitude Intervention in a Christian Church Community

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This field experiment examined the effects of a gratefulness intervention in the context of a Christian church congregation. Two Christian congregations with comparable demographic and socio-economic characteristics were enrolled and assigned to the experimental and comparison conditions. The gratitude intervention was developed collaboratively with church leaders. Though within-subject effects were found for psychological well-being, spiritual well-being, life satisfaction, positive and negative affect, daily spiritual experiences, and favorable views of psychology and interdisciplinary collaboration, the comparison group showed similar increases to the intervention group. Thus, the effects of the gratitude intervention were supported within but not across groups. No significant changes occurred on measures of interpersonal engagement. This research represents the first quasi-experiment to study a gratitude intervention within a faith congregation. In spite of methodological limitations, it highlights the potential benefit of gratitude interventions designed in collaboration with clergy.

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More than a decade of research has yielded compelling evidence of the benefits of gratitude, with trait gratitude being positively related to happiness, well-being, and even some parameters of physical health

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such as sleep quality or stress-response (Wood, Froh, & Geraghty, 2010). Gratitude shows stronger correlations to optimism, hope, positive affect, and life-satisfaction than any of the Big Five personality traits. People with a grateful disposition also tend to have empathy, be forgiving, and trusting (Emmons & McCullough, 2003; Watkins, 2014). Grateful individuals are more perceptive of simple everyday pleasures (Watkins, Woodward, Stone, & Kolts, 2003), show better recovery from traumatic experiences (Kashdan, Uswatte, & Julian, 2006), have a more proactive coping style, and are more likely to seek social support than those who are less grateful (Wood, Maltby, Gillett, Linley, & Joseph, 2008).

Following Rosenberg's (1998) taxonomy of emotions, gratitude can be understood at three levels: 1) an emotion – an acute and momentary affective experience, 2) a mood – an affective state that is more long-lasting and at the same time less conscious, and 3) an affective trait – a stable predisposition that defines a person's characteristic way of emotional responding (McCullough, Emmons, and Tsang, 2002; Watkins, 2014). At the most basic level, gratitude has been defined as “a positive emotional reaction to the receipt of a benefit that is perceived to have resulted from the good intentions of another” (Tsang, 2006, p. 139). McCullough, Kilpatrick, Emmons, and Larson (2001) defined gratitude as a moral emotion that fulfills important prosocial functions. It signals the receipt of a favor and prompts the recipient to respond and provide positive reinforcement to the benefactor. Often the reciprocal action will even extend beyond the benefactor to others, resulting in a feedback circle that perpetuates prosocial behavior in the broader social environment – a process Nowak and Roch (2007) have called upstream reciprocity. The moral affect of gratitude can very well take on trait characteristics

in individuals who develop a lasting and overarching schema that makes them more likely to notice received benefits, attribute them to a benevolent source, and reciprocate through responsive action.

Wood et al. (2010) expanded the concept of trait gratitude, proposing that it is not just a propensity to acknowledge favors received from others but actually a more wide-ranging “life-orientation towards noticing and appreciating the positive in life” (p. 892). This may include both worldly and transcendent dimensions (Emmons & Stern, 2013). As a worldly cognitive-affective state, it corresponds to the above definitions; at the transcendent level, it represents a perceptive awareness leading to a sense of connectedness with others and with the generous sustaining forces at work in the world. The latter corresponds well with the life-orientation conception of gratitude proposed by Wood et al. (2010), which seems to presume the ability to transcend the self and develop an interdependent view of the world.

### Gratitude and Religion

Both the worldly prosocial and the transcendent dimensions of gratitude have been emphasized in the Christian church, as well as in other religious traditions, across the ages. Gratitude is seen as completing a circle that begins with God reaching out to humans and ends in a complementary movement in which humans respond to God in thanksgiving. Protestant reformer John Calvin emphasized the complementary nature of grace and gratitude. He saw gratitude as the natural and appropriate response to the experience of grace (Gerrish, 1993).

Whereas the relationship between dispositional gratitude and various spiritual attributes is well documented (Emmons & Kneezel, 2005; McCullough et al., 2002; Watkins et al., 2003), the function of gratefulness in the context of spiritual beliefs and practices is not clear. Yet there are several reasons why religious gratitude may be a particularly suitable candidate for psychology of religion research. First, it would be interesting to examine the potential role of gratitude as one of the factors mediating the benefits of religious attendance for mental and physical health (e.g. Koenig, McCullough, & Larson, 2001; Strawbridge, Shema, Cohen, & Kaplan, 2001). In a recent correlational study, Sandage, Hill, and Vaubel (2011) found that dispositional gratitude mediated the relationship between generativity and mental health symptoms in a sample of Evangelical college students. Their findings point to the central role gratitude may play as

an “amplifier of the good” (Watkins, 2014, p. 248). Correlational research has found that religious beliefs and spirituality are positively related to dispositional gratitude. Grateful people tend to have higher levels of intrinsic religiosity and lower levels of extrinsic religiosity (Watkins et al., 2003). Gratitude in religious people is associated with a sense of nearness to God and a more secure attachment to God (Uher & Watkins, 2014; Watkins, Xiong, & Kolts, 2008). Grateful people also score higher on spiritual transcendence—a general sense of connectedness with sources of meaning outside the self (e.g. Diessner & Lewis, 2007).

Second, gratitude may be related to various spiritual practices. Lambert, Fincham, Braithwaite, Graham, and Beach (2009) conducted a series of longitudinal studies and demonstrated that prayer frequency predicted gratitude over time. This should not come as a surprise, given the fact that prayer itself may to a significant extent consist of expressions of gratefulness, which would perpetuate an attitude of gratitude. Moreover, spiritual practices are thought to have a direct impact on the experience of gratefulness. Emmons (2013) suggested that some traditional spiritual disciplines such as celebration, simplicity, service, or fasting are essentially ways to foster grateful awareness of the good experienced through savoring, sharing, or temporarily depriving oneself of things that would otherwise be taken for granted.

Third, gratitude may provide a point of common interest between clergy and psychologists. Clergy are often first responders and preferred providers in many mental health crisis situations (VanderWaal, Hernandez, & Sandman, 2012), and the workload of individual counseling along with the psychological needs of parishioners frequently represent a challenge to pastors. Ministers are often interested in receiving supportive consultations from mental health professionals (Lish, McMinn, Fitzsimmons, & Root, 2003), but this may be impeded by significant value discrepancies between clergy and mental health professionals (Newberry & Tyler, 1997). The goal of promoting prosocial values such as gratitude could help provide a basis of shared values for collaboration, particularly among those church leaders who are otherwise indifferent or skeptical of psychology.

Each of these reasons why gratitude may be a fitting topic for the psychology of religion presumes that gratitude has transcendent qualities beyond feeling happy about some immediate pleasure. A religious and spiritual understanding of gratitude seems

to correspond well with the concept of eudaimonic happiness—a state of congruence that results when people live in accordance with their values and convictions (Waterman, 1993). This higher sense of moral congruence is distinguished from hedonic well-being, which is related to drive fulfillment and short-term gratification. Eudaimonia has not only been related to gratitude in psychological research (Kashdan et al., 2006; Wood, Joseph, & Maltby, 2009), it also accommodates a view of gratitude as a spiritual discipline that promotes personal growth even in the face of adverse consequences as proposed by contemporary Christian authors such as Henri Nouwen (1992). Although the two facets of subjective happiness are not independent constructs, eudaimonia is presumably more suitable to open up shared conceptual ground for interdisciplinary program development than hedonic well-being.

### Gratitude Interventions

Increasingly, gratitude interventions are beginning to emerge in applied psychology settings. The potential role of gratitude as a resilience factor is now being studied in educational environments (Bird & Markle, 2012; Froh, Bono, & Emmons, 2010; Ma, Kibler, & Sly, 2013), work-related contexts (Lanham, Rye, Rimsky, & Weill, 2012), health psychology (Ruini & Vescovelli, 2013), and clinical psychology (Huffman et al., 2014; Nelson, 2009).

Three types of interventions have been used in experimental research, though no published studies have considered these interventions in the context of religious communities. In grateful reflection or recounting interventions, participants are typically asked to think of or write down a certain number of benefits they experienced during a specific period of time (Emmons & McCullough, 2003; Froh et al., 2010; Geraghty, Wood, & Highland, 2010; Seligman, Steen, Park, & Peterson, 2005; Sheldon & Lyubomirsky, 2006; Watkins et al., 2003). A second type of intervention involves expressing one's gratitude towards someone (Seligman et al., 2005; Watkins et al., 2003). A third sort of intervention used by Watkins, Cruz, Holben, and Kolts (2008) instructed participants to think about open memories of life experiences they still struggle to understand. This exercise aims at bringing closure to these experiences through a process of grateful reappraisal.

Experimental outcome research on ways to promote the expression of gratitude among religious groups

is virtually non-existent at this point. How might a Christian faith community benefit from a gratitude intervention? The purpose of this study was to examine areas of potential benefit of gratitude interventions that are well established in the literature (e.g., Wood et al., 2010), but to do so in the context of a religious faith community. Specifically, we expected to find enhanced functioning in psychological well-being and spiritual well-being. Additionally, the study addresses two further questions of interest: Does gratitude help to motivate participants to engage people outside their congregation? How does the collaborative approach in designing, administering, and evaluating the intervention impact the perception of psychology?

## Method

### Participants

Two small-town congregations in the Pacific Northwest agreed to participate in this research. Both congregations are moderately sized, averaging between 150 and 200 attendees for Sunday morning services. One congregation was assigned to be the intervention group, the other one became the wait-list comparison group. After the first congregation completed the intervention, the second congregation then engaged in a similar gratitude intervention.

A brief five-item gratitude questionnaire was given to all attending members of each congregation on three Sunday morning worship services, and a more intensive battery of questionnaires was collected from a convenience sample of participants in each congregation during the same three data collection periods. The gratitude group consisted of 27 individuals with an average age of 51.91 (standard deviation of 14.32), 11 of whom were male and 16 female. The comparison group consisted of 29 participants with an average age of 52.45 (standard deviation of 13.01), nine of whom were male and 20 female. The vast majority of both groups reported being European American, with one Native American participant and two not reporting ethnicity in the gratitude group. Four participants did not report ethnicity in the comparison group. The groups were equivalent for age, gender composition, race, employment status, level of trait gratitude, and tendency for desirable responding. However, there was a significant difference in education ( $\chi^2 = 18.09$ ,  $df = 4$ ,  $p < .001$ ), with a higher overall level of education among the participants in the gratitude group.

## Measures

**Dispositional gratitude.** Trait gratitude was measured using the Gratitude and Resentment Scale-Short Form (GRAT-S), which has three subscales: Sense of Abundance (GRAT-S-A), Appreciation for Simple Pleasures (GRAT-S-SP), and Social Appreciation (GRAT-S-SA; Thomas & Watkins, 2003; Diessner & Lewis, 2007). In the present study, the overall scale alpha was .86, .85, and .94 for Assessment 1, 2, and 3, respectively.

**Positive and negative affect.** The Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988) was used to measure two primary dimensions of mood. In the present study, alpha for positive affect was .88, .84, and .87 for Assessment 1, 2, and 3, respectively. For negative affect, the internal consistency coefficients were .91, .85, and .88.

Following McCullough et al. (2002), three items were added that specifically describe grateful affect: “grateful,” “thankful,” and “appreciative.” These provided a measure of state gratitude. In the present study, alphas for these three gratitude items were .82, .87, and .84 for Assessment 1, 2, and 3, respectively.

**Life satisfaction.** The Satisfaction with Life Scale (SWLS) (Diener, Emmons, Larsen, & Griffin, 1985; Pavot & Diener, 1993; Pavot, Diener, Colvin, & Sandvik, 1991) measures subjective happiness. In the present study, alpha was .91, .88, and .90 for Assessment 1, 2, and 3, respectively.

**Subjective well-being.** Subjective levels of well-being were measured using the Psychological Well-Being Scales (PWB) (Ryff, 1989; Ryff & Keyes, 1995). Importantly, the PWB reflects the existential facet of eudaimonic well-being that has been linked to gratitude. In the present study, overall alpha reliability was .92, .91, and .93 for Assessment 1, 2, and 3, respectively.

**Daily Spiritual Experiences Scale.** Spiritual experiences were assessed with the Daily Spiritual Experiences Scale (DSES; Underwood, 2011; Underwood & Teresi, 2002). In the present study, alpha was .91, .93, and .91 for Assessment 1, 2, and 3, respectively.

**The Duke University Religion Index (DUREL).** This five-item self-report scale was used to assess religious behavior (Koenig & Büssing, 2010). In the

present study, alpha was .72, .79, and .70 for Assessment 1, 2, and 3, respectively.

**Spiritual Well-being Scale.** The Spiritual Well-being Scale (SWB; Bufford, Paloutzian & Ellison, 1991; Paloutzian & Ellison, 1991) consists of two 10-item subscales—the Religious and the Existential Well-being Scales. In the present study, alpha coefficients were .94, .93, and .93 for Religious Well-being; .92, .88, and .88 for Existential Well-being; and .94, .93 and .94 for SWB.

**Interpersonal engagement.** To assess how gratefulness influences interpersonal relationships, a face valid Supportive Presence Scale (Uhder, 2014) was developed and used in this study. This scale measured participants’ attitudes and their actual behaviors over the previous month in two separate areas: providing practical help and offering emotional support. Each of these four items was presented in two variations, one focusing on fellow parishioners (SP-P), and the second on others outside (SP-O) the congregation as recipients. The resulting eight items were rated on a seven-point Likert-scale ranging from 1 (“Not at all”) to 7 (“A great deal”). In the present study, SP-P alpha coefficients were .69, .70, and .67 for Assessment 1, 2, and 3, respectively, and SP-O coefficients were .80, .75, and .83.

**Social desirability.** An eleven-item abbreviated version of the Marlowe-Crowne Social Desirability Scale (Reynolds, 1982) was used to verify participants’ tendency to present themselves in a socially desirable manner. Alpha coefficients in the present study were .64, .65, and .77 for Assessment 1, 2, and 3, respectively.

**Perception of interdisciplinary collaboration.** For the purpose of this study, a brief face valid questionnaire (Attitudes Toward Positive Psychology) was developed to assess perceptions about positive psychology and about the value of collaborating with psychologists among the leaders and participants from the participating congregations. The measure consisted of six items and used a 7-point Likert scale ranging from 1 (“Strongly disagree”) to 7 (“Strongly agree”). Participants were asked to express their views regarding the following statements: 1) Positive psychology is a worthwhile endeavor. 2) Christians have things to learn from positive psychologists. 3) Positive psychologists have things to learn from Christians. 4) Positive

psychology and Christianity share common values. 5) Psychological science can contribute to my faith. 6) It is important for science and faith to work together. In the present study, alpha was .84, .91, and .89 for Assessment 1, 2, and 3, respectively.

**Demographic Questionnaire.** Each participant was asked to complete a demographic questionnaire regarding information such as age, ethnicity/race, level of education, and employment status.

### Intervention

Consistent with what McMinn, Aikins, and Lish (2003) called “advanced collaboration,” we worked with the leaders of the two congregations to design a gratitude intervention that would be perceived as relevant and suitable to the culture and style of the church communities. In both congregations the four-week intervention was comprised of three essential components. The first was a sermon series focused on gratitude. Though the sermons differed in the two congregations, the lead pastors in each congregation agreed to write and deliver sermons related to gratitude. Second, a small study group of 20–25 interested individuals was assembled in each congregation. The exact nature of the small group was left to the discretion of the group leaders. A popular book on gratitude was provided to each group member (Emmons, 2013), and participants received weekly emails with reflections on gratitude, including links to inspirational videos and a slideshow as well as published quotations about gratitude. Third, a resource book with gratitude practices was made available to all parishioners in both congregations.

### Procedure

This study is based on a crossover design with three data collection periods. Campbell and Stanley (1963) raised concerns that this type of design does not allow for control of interference resulting from selection, maturation, and historical events. However, these limitations had to be weighed against the dangers of attrition and measurement fatigue, especially given the small sample sizes and the lack of direct contact between researchers and participants. Before the intervention began in Congregation 1, selected participants in each congregation completed the questionnaire package (Assessment 1), which included consent to participate in the study. In addition, all attendees in both congregations were asked to complete a brief grateful state measure. Four weeks later, at the end of the intervention period with Congregation 1, the primary outcome measures were re-administered to the

select groups in each congregation, and the brief congregation-wide questionnaire was administered again to each congregation (Assessment 2). At this point, Congregation 2 began their gratitude intervention. As some studies have documented significant long-term increases in well-being measures after the end of the intervention (Froh, Sefick, & Emmons, 2008; Seligman et al. 2005), participants in Congregation 1 completed the outcome measures a third time four weeks later, after the intervention was completed in Congregation 2. Participants in Congregation 2 also completed the outcome measures a third time four weeks after completing their intervention (Assessment 3). Individual participants who completed the online questionnaire packages on all three occasions received \$50 compensation. After removing outliers presumably related to having the web browser open for multiple hours, the average time taken to complete the questionnaire package was 29.8, 27.0, and 23.6 minutes for Assessments 1, 2, and 3, respectively.

### Results

Results of the various measures for both congregations are displayed in Table 1. Univariate analyses of variance (ANOVAs) were conducted to verify the equivalence of both groups in measures of trait gratitude and tendency to respond in a social desirable manner at Assessment 1. No significant differences were found in average GRAT-S scores,  $F(1, 53) = .00$ ,  $p = .99$  and average SDS scores,  $F(1, 53) = .77$ ,  $p = .38$ .

Analysis of distributions showed significant skew for the majority of psychological measures in this sample. Only the Marlowe-Crowne Social Desirability Scale showed a Skew/ Standard Error of Skewness (SE) ratio significantly less than 2.00. Most of the religion and spirituality scales also showed a Skew/SE ratio greater than 2.00, as did our Attitudes Toward Positive Psychology scale. The exceptions were the measures of daily spiritual experiences and the gratefulness items added to the PANAS. A serious degree of kurtosis was also noted for the GRAT-S-SP and GRAT-S-A, SWLS, RWB, EWB, DUREL, and Attitudes Toward Positive Psychology. Given the extent of departure from normality in distributions of the scales in the present study, statistical estimates are likely significantly distorted. In particular, the degree of negative skew indicates that scores tended to cluster near the ceiling of most of these scales, including the gratitude measure, subjective well-being scale, and DUREL in particular, thus allowing for little increase in scores on these scales as a result of the gratitude intervention.

**TABLE 1**

*Scores on Outcome Measures*

Scale	Assessment 1		Assessment 2		Assessment 3		Effects
	Congregation 1 (N = 27)	Congregation 2 (N = 27)	Congregation 1 (N = 27)	Congregation 2 (N = 27)	Congregation 1 (N = 27)	Congregation 2 (N = 27)	
Grateful State	4.08 (0.69)	4.01 (0.77)	4.22 (0.51)	4.11 (0.59)	4.37 (0.56)	4.05 (0.84)	None
GRAT-S	7.69 (0.87)	7.65 (0.97)	7.83 (0.80)	7.80 (0.86)	7.84 (0.93)	7.65 (1.58)	None
GRAT-S-A	7.26 (1.32)	7.31 (1.75)	7.37 (1.39)	7.52 (1.47)	7.48 (1.61)	7.41 (1.81)	None
GRAT-S-SP	7.99 (1.03)	8.06 (0.77)	8.04 (0.79)	8.21 (0.69)	8.12 (0.82)	8.01 (1.62)	None
GRAT-S-SA	7.88 (0.98)	7.52 (1.08)	8.18 (0.64)	7.57 (1.17)	7.97 (0.96)	7.46 (1.78)	None
SWLS	5.17 (1.02)	5.02 (1.38)	5.54 (1.03)	5.19 (1.16)	5.53 (0.91)	5.42 (1.06)	RM: $F(2, 104) = 10.66$ , $p < .001$
PWB	4.48 (0.57)	4.62 (0.50)	4.62 (0.58)	4.64 (0.43)	4.60 (0.61)	4.74 (0.45)	RM: $F(2, 104) = 4.98$ , $p = .01$
PWB - SA	4.38 (0.92)	4.38 (0.95)	4.51 (0.93)	4.56 (0.80)	4.57 (0.82)	4.70 (0.75)	RM: $F(2, 104) = 8.31$ , $p < .001$
PWB - PG	4.83 (0.70)	4.93 (0.54)	4.94 (0.65)	4.87 (0.51)	4.99 (0.66)	5.06 (0.48)	None
PWB - EM	4.04 (0.67)	4.29 (0.55)	4.27 (0.61)	4.28 (0.55)	4.21 (0.66)	4.34 (0.57)	None
PWB - PR	4.75 (0.68)	4.90 (0.77)	4.96 (0.63)	4.86 (0.78)	4.86 (0.67)	4.98 (0.65)	None
PWB - A	4.21 (0.80)	4.29 (0.80)	4.26 (0.80)	4.29 (0.72)	4.25 (0.71)	4.40 (0.67)	None
PWB - PL	4.66 (0.74)	4.88 (0.51)	4.77 (0.71)	5.01 (0.50)	4.71 (0.68)	4.98 (0.58)	None
PANAS +	3.52 (0.61)	3.60 (0.61)	3.72 (0.45)	3.79 (0.53)	3.84 (0.54)	3.70 (0.63)	RM: $F(2, 104) = 5.90$ , $p = .004$
PANAS -	2.10 (0.75)	1.64 (0.51)	1.78 (0.58)	1.60 (0.41)	1.96 (0.68)	1.62 (0.52)	BG: $F(1, 52) = 6.12$ , $p = .02$
SWB	4.81 (0.71)	5.22 (0.65)	4.92 (0.67)	5.30 (0.62)	5.04 (0.66)	5.33 (0.63)	RM: $F(2, 104) = 5.83$ , $p = .005$ ; BG: $F(1, 52) = 4.61$ , $p = .04$
EWB	4.72 (0.78)	5.05 (0.76)	4.84 (0.69)	5.20 (0.64)	4.91 (0.68)	5.20 (0.69)	RM: $F(2, 104) = 4.78$ , $p = .010$ ;
RWB	4.88 (0.76)	5.39 (0.88)	5.00 (0.74)	5.40 (0.91)	5.17 (0.72)	5.47 (0.82)	RM: $F(2, 104) = 4.65$ , $p = .012$ ;

**TABLE 1 (CONTINUED)**

*Scores on Outcome Measures*

Scale	Assessment 1		Assessment 2		Assessment 3		Effects
	Congregation 1 (N = 27)	Congregation 2 (N = 27)	Congregation 1 (N = 27)	Congregation 2 (N = 27)	Congregation 1 (N = 27)	Congregation 2 (N = 27)	
DSES	4.23 (0.70)	4.35 (0.82)	4.46 (0.70)	4.51 (0.82)	4.47 (0.71)	4.68 (0.60)	RM: $F(2, 104) = 10.14$ , $p < .001$ ;
DUREL	4.92 (0.44)	4.95 (0.58)	4.97 (0.47)	5.05 (0.58)	4.96 (0.47)	5.07 (0.43)	None
SP-P	5.61 (0.98)	4.95 (1.11)	5.59 (0.94)	4.87 (1.15)	5.62 (1.02)	4.75 (1.24)	BG: $F(1, 52) = 7.83$ , $p = .01$
SP-O	5.16 (0.90)	4.71 (1.02)	5.41 (1.01)	4.84 (0.94)	5.31 (0.99)	4.62 (0.94)	BG: $F(1, 52) = 5.81$ , $p = .02$
ATT-P	5.49 (0.83)	5.69 (0.87)	5.80 (0.91)	5.59 (0.92)	5.83 (0.86)	5.87 (1.01)	RM: $F(2, 104) = 3.24$ , $p < .04$

*Notes.* Congregation 1 received the gratitude intervention between Assessment 1 and Assessment 2. Congregation 2 received the gratitude intervention between Assessment 2 and Assessment 3. Average responses on scales were used rather than sums to control for missing item responses. Grateful State was measured with the gratitude items added to the Positive and Negative Affect Scale. GRAT-S = Gratitude and Resentment Scale – Short Form. GRAT-S-A = GRAT-S, Sense of Abundance subscale. GRAT-S-SP = GRAT-S, Appreciation for Simple Pleasures subscale. GRAT-S-SA = GRAT-S, Social Appreciation subscale. SWLS = Satisfaction with Life Scale. PWB = Psychological Well-being Scale. PWB-SA = PWB, Self-Acceptance subscale. PWB-PG = PWB, Personal Growth subscale. PWB-EM = PWB, Environmental Mastery subscale. PWB-PR = PWB, Positive Relations subscale. PWB-A = PWB, Autonomy subscale. PWB-PL = PWB, Purpose in Life subscale. PANAS + = Positive and Negative Affect Scale – Positive Affect. PANAS - = Positive and Negative Affect Scale – Negative Affect. SWB = Spiritual Well-being Scale. EWB = SWB, Existential Well-being subscale, RWB = SWB, Religious Well-being Subscale. DSES = Daily Spiritual Experiences Scale. DUREL = Duke Religion Inventory. SP-P = Supportive presence toward fellow parishioners. SP-O = Supportive presence toward those outside the congregation. ATT-P = Attitudes toward Psychology. RM = Repeated Measures effect. BG = Between Groups Effect.

Changes over time on the various outcome measures were assessed using mixed-method ANOVAS, with the repeated-measures factor being changes across time for the three measurements and the between-groups factor being the two congregations (one receiving the intervention, the other one serving as a wait-list control). Our expectation was that group x time interaction effects would be observed, with Congregation 1 showing differential increases in outcome measures between Assessment 1 and Assessment 2, while Congregation 2 served as the wait-list comparison. The expected interaction effects were not observed. Repeated measures effects were observed for a number of outcome variables, including satisfaction with life, psychological well-being, positive affect, negative affect, daily spiritual experiences, and attitudes toward psychology. In each case the changes were in the direction expected for the congregation engaged in the gratitude intervention, but they were not specific to that congregation. In addition, some differences between the congregations were noted. These included spiritual well-being (Congregation 2 was higher than Congregation 1) and supportive presence to others (Congregation 1 was higher than Congregation 2). All significance testing results are reported in Table 1.

The intention of the research design was for all congregation members to complete a brief five-item gratitude questionnaire at each assessment period, and for a smaller group to complete the more intensive packet of questionnaires. However, we found the former to be more difficult than anticipated. Though we gathered about 100 of the brief questionnaires for each congregation at each assessment point, their self-defined identification numbers did not often match, and many people did not attend and participate in all of the three assessment periods. As a result, only 16 members of the congregation that served as intervention group (Congregation 1), and only 22 members of the comparison group (Congregation 2) completed the brief gratitude questionnaire at all three measurement times. Results of these brief all-congregation surveys showed no significant group effects, changes over time, or interaction effects.

### Discussion

This is the first quasi-experimental study to examine the effects of a gratitude intervention in the context of a Christian faith community. We collaborated with church leaders in developing a strategy intended to promote gratefulness among Christian believers. This project is unique in that, while providing resources and consultation, it intentionally sought to

give church leaders a maximum degree of control over the intervention.

We expected to replicate some of the well-established effects of gratitude on parameters of subjective well-being within the context of a Christian faith community. In addition to life satisfaction and affective well-being, we included religious experiences, religious well-being, interpersonal engagement, and participants' perceptions of psychology and interdisciplinary collaboration. We expected the four-week gratefulness campaign in the congregation assigned to the intervention condition to lead to statistically significant benefits in all of these areas. In contrast, the second congregation that functioned as a comparison group was not expected to manifest any significant changes on outcome measures over the same four-week period. No specific expectations were formulated for the second four-week period.

Overall, the gratefulness campaign in the intervention group seemed to have a moderate positive effect on eudaimonic happiness. The subjective well-being increases are significant and changes match the predicted pattern. We also found significant differences in the predicted direction for the subjective well-being facet of self-acceptance. These outcomes provide partial support to the findings from Wood, et al.'s (2009) hierarchical regression model in which gratitude predicted four of the six eudaimonic happiness dimensions measured by the PWB. Participants of the intervention group also showed significant benefits in affect quality: both increases in positive affect and decreases in negative. The gratitude intervention was also associated with increases in spiritual well-being and everyday spiritual experiences among participants of the intervention group. Surprisingly, those in the comparison congregation reported similar changes to those participating in the gratefulness campaign.

Many possible explanations could be offered for why those in the comparison group changed at similar rates to those in the experimental group. It is possible that ministry as usual promotes gratitude, regardless of whether it is done as part of an explicit gratitude campaign. There may also have been extraneous factors, such as improving weather throughout the course of the gratitude intervention. It is also possible that the comparison group started early in unintentional ways, knowing that they were soon to participate in a gratitude campaign of their own. Testing effects are also possible, where completing questionnaires at Assessment 1 served as an intervention to enhance gratitude in both congregations. Finally, the possibility of demand characteristics should be considered, where

participants felt subtle pressure to improve over the three assessment periods (Rosenthal & Rosnow, 2009).

The gratefulness campaign did not have any effect on the measures of supportive presence toward others, either within or outside the congregation, though it appeared to have a significant positive impact on participants' perception of psychology and interdisciplinary collaboration. Presumably, the exposure to the resources provided and perhaps the practice of gratefulness itself resulted in an appreciative attitude towards the psychologists who have made gratitude the focus of their work.

### Limitations

The collaborative nature of this project included crafting various aspects of the research design so that clergy could continue their ministries without the burden of artificial constraints. This approach necessitated a number of difficult choices that imposed significant methodological limitations at every level. During the recruiting phase, finding church leaders who were willing to commit to this unusual project had to take precedence over many other considerations that typically guide decision-making in research. The decision to assign participants to intervention and comparison groups along congregational lines introduced error variance due to factors beyond demographics that make up the unique character of a congregation (such as differences in theology, organizational dynamics or simply current circumstances).

During the design phase, allowing church leaders to take full ownership of the project required relinquishing most of the details that would be important to control in an experimental study. This resulted in a rather opaque intervention phase that provided very limited information about what participants actually did and how seriously they invested themselves into the various proposed grateful practice activities. For example, though lead pastors in each congregation preached sermons on gratitude, they were not the same sermons, and it is unclear how similar the content may have been. Similarly, though a gratitude practices resource book was provided to both congregations, we do not know how many people actually used the gratitude practices described in the resource book.

In hindsight, it would have been good for those who participated in the small gratitude groups to be the same individuals as those who completed the extensive assessment batteries. Instead, both the small group participants and those completing the assessment batteries were convenience samples determined

by church leaders and were not necessarily the same individuals.

In spite of the challenges they present, limitations such as these are not uncommon in field experimental research. In some ways, this study bears characteristics of an encouragement design, a research design that "randomly encourages some people and not others to engage with the treatment, and then measures reactions within the entire sample of encouraged vs. not-encouraged people" (Paluck & Cialdini, 2014, pg. 88). On the positive side, this methodology allowed for an ecologically valid approach that enhances the prospect that similar interventions may be used in other congregations. Further, any positive findings can more readily be generalized to other congregations.

This study, with its theoretical and methodological shortcomings, illustrates the complexity of collaborative psychological research in the context of church communities. Its usefulness in promoting the science of gratitude will certainly be limited, since there are many caveats to be considered in evaluating this project. Many of the instruments used to measure the effects of intervention are known to be susceptible to ceiling effects, particularly in samples of Evangelical Christians. The restricted ranges of scores clustering at the upper end of the scales necessarily limit their sensitivity to detect subtle effects. The power of statistical methods is also affected by the small sample size and departures from normality. Furthermore, it would be ignorant to assume that gratefulness is solely or primarily the result of a psychological intervention. Religious people tend to be grateful people (e.g. Watkins, 2014), and the potential of a gratitude campaign to bring about significant effects may be rather limited. In other cases, the potential of an intervention to bring about significant change is inhibited by a participant's lack of readiness (Miller & Rollnick, 2013). This criterion, which is regularly assessed in clinical settings, may also play a significant role in limiting effects of research interventions, particularly in studies where natural groups as a whole are recruited.

### Future Directions

Several suggestions for further research can be offered. First, the designing of a gratitude intervention that is comparable across different settings would require a more intensive process of collaboration during the design stage. It may also be useful to create a team of group facilitators trained by the researchers in collaboration with pastoral leaders in order to ensure the quality and integrity of the intervention.

Second, it is very difficult to isolate the effect of a gratitude intervention in the context of the ministry of a church where personal testimonies, the experience of nurturing relationships, or simply the singing of a hymn can give rise to moments of intense gratefulness even without any specific exercise to promote it. However, in order to at least reduce the inevitable systematic interferences, future studies may want to recruit intervention and comparison groups from one larger congregation rather than using groups from different congregations.

Third, the collaboration model used in this study (Lish, et al., 2003; McMinn, et al., 2003) was based on the recognition that the leaders of the participating congregations bring their own expertise to bear and can be expected to know best how to communicate the benefits of gratitude to their church members. Underlying this approach is the principle of true eye-level communication in a deliberate effort to counteract the common perception of psychology as being a domineering and patronizing partner in the dialogue with the church. As a result, the consultation component was limited to providing educational resources and the quasi-experimental design structure of the project. Future research may find a way to carry this dialogue further to a point where it opens the door to a process of more intentional program development, informed by sound theology and psychological research. This might require a much more sustained effort to create a culture of mutual respect, curiosity, and creative cross-fertilization at the local or regional level.

### Conclusion

Taken as a whole, this study produced several positive outcomes. First, effective collaboration between psychologists and clergy was established. Second, the process resulted in more favorable attitudes toward psychology at the end of the study. Third, several significant changes were observed, although they were not clearly linked to the gratitude intervention. Among these were increases in satisfaction with life, psychological well-being, positive affect, daily spiritual experiences, and attitudes toward psychology.

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