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Development, Refinement, and Psychometric Properties of the Attitudes Toward God Scale (ATGS-9)

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Perceived relationships with God can be a source of comfort or struggle. To advance the study of spiritual comfort and struggle, we develop the nine-item Attitudes toward God Scale (ATGS-9), and we describe six studies (2,992 total participants) reporting its development and psychometrics. Exploratory and confirmatory factor analyses identified two factors: (1) Positive Attitudes toward God and (2) Disappointment and Anger with God. Subscale scores showed good estimated internal consistency, 2-week temporal stability, and evidence for construct and discriminant validity. Positive Attitudes toward God correlated with measures of religiosity and conscientiousness. Disappointment and Anger with God correlated with negative religious coping, lower religious participation, more distress, higher neuroticism, and entitlement. These results support the ATGS-9 as a brief measure of attitudes toward God.

Keywords: Anger at God, scale development, psychometrics, spirituality, religion

When people see themselves as having personal relationships with God, they often find these bonds to be sources of attachment security (e.g., Kirkpatrick, 1998, 2004), comfort (e.g., Exline, Yali, & Sanderson, 2000), and resources for coping (e.g., Pargament, 1997, 2007). Despite these benefits, a perceived relationship with God can also be a source of strain or struggle (for reviews, see Exline & Rose, 2005;

Pargament, Murray-Swank, Magyar, & Ano, 2005). In the present article, we will focus on one specific type of spiritual struggle: feelings of disappointment and anger with God. Because research on disappointment and anger with God is still in its infancy (e.g., Exline, Park, Smyth, & Carey, 2009; see Exline & Martin, 2005, for a review), measurement issues are especially crucial to address at this time. In particular, a need has evolved for a brief measure, one that researchers and clinicians could use in studies that do not have disappointment and anger with God as their main focus. In response to this need, this article describes the development of a nine-item scale, the Attitudes toward God Scale (ATGS-9), that can be used to assess disappointment and anger as well as positive attitudes toward God.

Conceptual Background: Relationships With God

People often see themselves as having relational bonds with God or a Higher Power (e.g.,

Hall, 2004; Sandage & Shults, 2007; Simpson, Newman, & Fuqua, 2008). Relational spirituality, which is one approach to understanding these perceived relational bonds, emphasizes factors that may lead to transformation or to conservation of a relationship with the Sacred (e.g., Shults & Sandage, 2006). Wuthnow (1998) has also suggested that many people go through periods of seeking the Sacred and periods of dwelling in relatively stable relationship to the Sacred. Granted, relationships with the Sacred can differ from interpersonal relationships in major ways. Unlike a human relationship partner, the God figure of monotheistic traditions is typically portrayed as being all-powerful, all-knowing, holy, and capable of being present everywhere at once. In addition, people usually do not report that they are able to see or hear God with their physical senses. Rather, the relationship is often more cognitively or emotionally based. Thus, the relationship may be experienced as a less tangible, though perhaps no less real, than other relationships. People often believe that God is present but cannot prove this through naturalistic means.

Despite these unique features, there are important ways in which people's perceived relationships with God parallel interpersonal relationships. For example, individuals often try to communicate with God through prayer (e.g., Ladd & Spilka, 2006; Poloma & Gallup, 1991). As shown in research on God images (see Moriarty & Hoffman, 2007, for a review), people often envision God as having human features and personality characteristics, which might range from a benevolent father figure to a raging tyrant. Another human parallel is especially relevant for our purposes here: the notion that people can experience emotions toward God that are similar to those they experience toward other people.

On the positive side, studies have documented that many people see God as loving (e.g., Benson & Spilka, 1973; see Moriarty & Hoffman, 2007, for a recent review) and report experiences of love or communion in their relationships with God (e.g., Beck, 2006; Exline et al., 2000). For many believers, the bond with God takes the form of an attachment relationship (e.g., Beck & McDonald, 2004; Kirkpatrick, 1998, 2004; Kirkpatrick & Shaver, 1990; Rowatt & Kirkpatrick, 2002) in which

they see God as nurturing, protecting, and caring for them. Seeing oneself as having an all-powerful, all-knowing caretaker can provide a sense of security, and indeed people often do report that they see this bond as a substantial source of comfort (Exline et al., 2000). Many people also report that their relationships with God help them to cope with life's stressors (e.g., Pargament, 1997, 2007; Pargament, Koenig, & Perez, 2000; Pargament, Ano, & Wacholtz, 2005), and this type of positive religious coping has been shown to predict positive outcomes in terms of emotional adjustment (see Pargament, Ano, et al., 2005, for a review) and physical health (see Koenig, McCullough, & Larson, 2001, for a review).

However, as with any relational bond, a relationship with God can be a source of conflict and struggle. For example, people may see God as a harsh and unloving figure (see Moriarty & Hoffman, 2007, for a review), one who accepts them only if they live up to certain behavioral codes. They may perceive God as smothering or controlling (e.g., Benson & Spilka, 1973), wanting to interfere with their choices and freedom. When bad things happen, people may believe that God is punishing them (e.g., Pargament et al., 1998, 2000), and they may even feel as though God has abandoned them altogether (Exline et al., 2000). Feelings of frustration and anger can arise when people perceive God's actions as unfair (see Exline & Martin, 2005, for a review), particularly in cases that involve suffering of innocent people or animals, or evildoers that go unpunished (see also Altemeyer & Hunsberger, 1997; Hunsberger, McKenzie, Pratt, & Pancer, 1993).

Not only are these struggles regarding God interesting from a conceptual perspective, they also have important clinical implications. For example, spiritual struggles have been linked with mental health difficulties (e.g., Edmondson, Park, Chaudoir, & Wortmann, 2008; McConnell, Pargament, Ellison, & Flannelly, 2006; for reviews, see Exline & Rose, 2005; Pargament, 2002; Pargament, Murray-Swank, et al., 2005; Pargament, Koenig, Tarakeshwar, & Hahn, 2004,), and may predict poorer physical health outcomes as well (e.g., Fitchett, Rybaraczyk, DeMarco, & Nicholas, 1999; Pargament, Koenig, Tarakeshwar, & Hahn, 2001, 2004). These connections between spiritual struggle and poor adjustment are likely to reflect a broader psy-

chological principle: Any chronic stressor can have numerous mental and physical health sequelae (McEwen, 2002).

It is important to note struggle with God does not necessarily imply rejection of God. Admittedly, some evidence suggests a connection between anger with God and avoidance behaviors, including withdrawal from the relationship (Exline & Martin, 2005). Yet for some individuals, anger with God might be part of a close, engaged relationship characterized by strong emotions—positive and negative. It is not enough, therefore, to assess merely anger with God. At least one secondary assessment must be made—one that allows concurrent assessment of both anger and positive attitudes toward God. Such an instrument could provide a quick and efficient insight into the nature of one's relationship during and after spiritual struggle.

The Need for a Brief Measure of Anger With God

Although research on anger with God is moving forward, this remains an area where empirical work is in its infancy (for a review, see Exline & Martin, 2005). Given the conceptual and practical importance of the concept of struggle with God, a need has arisen for a brief, reliable measure that can be used widely by both researchers and clinicians. To date, most of the relevant research has taken one of several forms. First, a few studies have used very brief measures, sometimes single items (e.g., Exline et al., 2000; Exline et al., 2009, Studies 3 & 4). Although such items can have good face validity, most people believe that they have major limitations in terms of reliability (cf. Wanous, Reichers, & Hudy, 1997, who argue with the support of validity data that in some cases, single items function well). At the other extreme, studies with a primary focus on anger with God have used situation-specific measures to assess God-related attributions, emotions, and behaviors in considerable depth (e.g., Exline et al., 2009, Studies 1 & 2). In a related vein, Gall, Kristjansson, Charbonneau, and Florack (2009) gave measures of God image and emotion (directed at God) to breast cancer patients and derived a factor analyzed composite of anger at God. Although these in-depth assessments fit the research context in which they were used, the resulting measures may be too long, complex, or specific to be practical for clinical use or studies in which anger with God is a less central theme. Also, because the measures were derived to fit specific situational contexts, they might not replicate in other samples.

Much of the prior research relevant to anger with God has come from items on more general measures of spirituality or struggle. For example, items relevant to anger with God appear on the negative religious coping subscale of the RCOPE (Pargament et al., 2000) and in the Spiritual Assessment Inventory (Hall & Edwards, 2004). Both of these scales are relatively long and anger at God is embedded within more general measures of religious struggle. These measures have the advantage of tapping many forms of spiritual struggle. However, these measures typically only devote a small percentage of their items to anger with God because they were designed to measure spiritual strains more generally. Researchers may also be reluctant to analyze items reporting anger at God in isolation from the broader measures. Yet, in a brief review, Exline and Martin (2005) have shown that examining disappointment and anger at God as a targeted response—not merely the more complexly constitutes spiritual struggle—is heuristic.

The Present Studies: Purpose and Procedural Overview

To summarize, there now seems to be a clear need for a brief, psychometrically sound measure of anger, disappointment, and negative attitude toward God as well as one that will assess positive emotions toward God. Such a measure could allow researchers and clinicians to determine whether people who are angry and disappointed with God are engaged or disengaged with God. The measure presented in this present article represents an initial attempt to meet that need.

As a starting point, we used a revised but unpublished version of the previously published Religious Comfort and Strain scale (RCS; Exline et al., 2000), which has been used in a variety of formats in different research studies. The RCS has been initially heuristic; however, it has been used in a variety of formats including different items. Psychometrically, we believed that there was a need to shorten and standardize the RCS, focusing it more pointedly toward a measure of positive attitudes toward

God and negative attitudes toward God (specifically Disappointment and Anger with God). The prior scale—the RCS—formed our initial pool of items. In the studies presented here, we reduced the item pool to find two stable factors (Study 1). We conducted a confirmatory factor analysis and provided several tests of validity (Study 2). Next, we turned to issues of temporal stability (Study 3) before attempting additional validity tests in several student samples (Studies 4 and 5), one of which (Study 5) was an Internet sample. In a final study (Study 6), we examined norms as well as data on gender, ethnicity, and religion in a much larger undergraduate sample.

Study 1: Development and Refinement of an 11-Item Scale to a 9-Item Scale

Introduction

The purpose of Study 1 was to develop and refine a brief scale to measure anger and positive attitudes toward God. Based on an unpublished revision of the earlier Religious Comfort and Strain scale (Exline et al., 2000), we selected a set of 11 items from previous versions of the RCS on the basis of three criteria: (a) face valid items; (b) items specifically targeted to measure the two attitudes toward God we believed to be most fruitful to examine (e.g., positive attitudes and negative attitudes, specifically disappointment and anger with God); and (c) items that had been used in several prior studies and had caused no problems in participant response. In Study 1, we examined the factor structure (using exploratory factor analytic methods) of the attitudes toward God scale (ATGS) and then refined the scale according to the factor analytic results. We hypothesized that positive attitudes toward God and disappointment and anger with God would be relatively independent of each other.

Method

Participants and procedure. Volunteers (N_1 = 394) from undergraduate psychology classes at two United States universities completed and returned questionnaires concerning religion and God. All received partial course credit for participation. One university was a private research university in the Great Lakes region (n = 87), and the other was a city university located in an urban area of the Northeast (n = 307). Because mean item scores did not differ significantly between the two universities, samples were combined. We then randomly divided this larger sample into two subsets of similar sizes to enable us to run two factor analyses (N_{1a} = 193); (N_{1b} = 201). In Table 1, we summarize demographic data.

Attitudes Toward God Scale-11 (ATGS-11). As described above, the ATGS started as an 11-item self-report scale to assess two attitudes toward God: positive attitudes and anger. Each item was scored on an 11-point rating scale ranging from 0 = *not at all* to 10 = *extremely*. The items were selected from a revised, unpublished version of the Religious Comfort and Strain scale (RCS; Exline et al., 2000).

Results and Discussion

Study 1a: Principal components analysis for data set one. Scores from data set one (N_{1a} = 193) on the ATGS-11 were analyzed using principal components analysis (PCA). Before conducting the PCA, we assessed the data for suitability for factor analysis. A correlation matrix revealed multiple correlations of .3 or larger. The Kaiser-Meyer-Oklin value was .87, a value that surpasses the suggested value of .6 (Kaiser, 1970, 1974). Barlett's Test of Sphericity was significant, providing additional support for the use of factor analysis (Bartlett, 1954).

PCA revealed three components with Eigenvalues exceeding 1, explaining 45.4%, 25.6%, and 9.2% of the variance, correspondingly. A scree plot revealed a clear break after the second component. A parallel analysis (Watkins, 2000) generated random numbers; only two components had Eigenvalues exceeding the corresponding criterion values for a randomly generated data matrix of the same size. Using Catell's (1966) scree test, conducting a parallel analysis, and avoiding two-item scales, we retained two components for further analysis. Items were retained if they (a) loaded at .75 or higher on one factor and (b) did not load higher than .2 on the other factor. Nine items met these rigorous criteria and were retained to form the ATGS-9.

Because we dropped two items, we ran another PCA (using Varimax rotation) on the nine items identified in data set one (N_1 = 193).

Table 1

Descriptive Data for Demographics of Participants in Each Study

Demographic	Study 1a	Study 1b	Study 2	Study 3	Study 4	Study 5	Study 6
N	193	201	93	138	304	162	1,803
Age (years)							
M	19.22	19.66	18.71	19.18	21.31	18.90	20.65
(SD)	(1.93)	(2.59)	(1.105)	(3.035)	(4.6)	(1.12)	(3.89)
Range	18–34	17–35	18–25	18–48	17–46	18–23	17–58
Ethnicity (%)							
African American	1.8	3.5	3.3	3.6	30.6	8	36.3
Latino	1.8	1.4	—	1.4	30	1.9	1.1
Asian	16.6	18.8	22.8	19.6	21.2	22.8	1.4
Middle Eastern	3.4	.8	2.2	4.3	2.7	2.5	—
Native	2.5	0	1.1	.7	.3	11.9	0.7
White	73	75.7	69.6	72.5	9.2	58.8	54.5
Multiracial/ethnic background	—	—	3.3	—	5.7	.6	
Other	1.2	2.1	—	.7		1.8	6.0
Religion (%)							
Christian	—	—	—	—	—	—	32.4
Catholic	26.9	30.7	29.7	33.3	32	—	15.2
Eastern Orthodox	.6	1.4	4.3	2.9	1.3	—	—
Protestant	28.1	29.3	27.2	34.8	27.9	—	14.6
Jewish	5	5	5.4	3.6	1.7	—	0.2
Muslim	3.1	2.9	3.3	2.2	9.1	—	0.3
Hindu	6.3	2.9	3.3	5.8	2	—	0.2
Sikh	—	—	0	0	4	—	—
Buddhist	1.9	2.1	5.4	2.9	.7	—	0.4
Taoist	0	1.3	4.4	.7	—	—	—
New age	.6	0	0	0	.7	—	—
Atheist	11.9	14.3	9.8	—	2.7	—	—
None	10	9.3	13	—	8.1	—	3.3
Agnostic	—	—	—	—	—	—	2.4
Other	6.3	4.3	7.7	1.4	7.4	—	2.3
Unsure	8.1	6.4	—	4.3	2.4	—	—
Born-again Christian	—	—	13	17.2	—	—	—
Baptist	—	—	—	—	—	—	28.6
Not religious	—	—	31.5	—	—	—	—
Gender (%)							
Female	51.3	53.5	62	56.5	60.7	53.1	73.7
Male	48.7	46.5	38	43.5	39.3	46.9	26.3

Note. Ethnicity, gender, and religious orientation are reported as a percentage of the total sample size for that study. Note that extreme care in interpreting these norms is recommended because some sample sizes are small. A dash indicates that specific data were not collected.

Factor one had five items (range: 0 to 50), accounting for 49.3% of the common variance ($M = 33.1$, $SD = 16.7$). The first factor assessed positive attitudes toward God. Factor two, which had four items (range 0 to 40) and accounted for 31.2% of the common variance, assessed disappointment/anger with God ($M = 6.0$, $SD = 7.4$). The two factors explained 80.5% of the total item variance. The rotated solution thus revealed the presence of a simple structure, such that both components showed a number (5 and 4, respectively) of strong loadings and each item loaded substantially on only one component (Thurstone, 1947). In Table 2, we report norms including kurtosis and skewness statistics. We tabulated the norms for each sample, and when available computed the norms by gender and ethnicity. In Table 3, we report means, standard deviations, factor loadings, and communalities for each item. When we report scale scores throughout the article, we sum across items.

Alphas and subscale correlations. In Table 2, we list Cronbach's alphas for the ATGS-9 and

Table 2
Norms

Study	Description	n	Positive					Anger				
			M	SD	Alpha	Skewness	Kurtosis	M	SD	Alpha	Skewness	Kurtosis
1	University students*	394	32.03	16.94	.96	−.78	−.65	6.08	7.34	.85	1.26	1.02
1a	University students	193	33.31	16.70	.97	−.81	−.61	6.02	7.35	.85	1.33	1.49
1b	University students	201	32.36	16.9	.97	−.77	−.67	6.21	7.41	.93	1.27	.67
2	University students (full sample)	92	29.62	17.97	.97	−.47	−.12	4.85	7.71	.93	2.17	4.89
3–Time 1	University students*	138	27.80	10.42	.94	−.83	.07	7.22	7.75	.88	1.43	1.75
3–Time 2	University students*	99	34.74	13.02	.95	−.83	.07	7.83	8.23	.90	.82	.44
4	University students*	304	37.55	15.31	.95	−1.27	.43	4.40	7.13	.80	2.11	4.39
4	European American	28	23.31	17.37	.96	—	—	5.46	6.70	.64	—	—
4	African American	91	44.03	10.36	.91	—	—	3.09	6.98	.75	—	—
4	Native American	1	50.00	—	—	—	—	.00	—	—	—	—
4	Hispanic/Latino	89	39.62	11.70	.91	—	—	5.13	7.91	.82	—	—
4	Asian	63	33.96	16.56	.94	—	—	5.12	7.86	.87	—	—
4	Multiethnic	17	27.41	20.94	.99	—	—	4.49	6.51	.86	—	—
4	Middle-Eastern	8	44.38	13.91	.95	—	—	5.00	9.02	.73	—	—
4	No race specified	7	31.25	20.80	.95	—	—	1.28	2.36	.73	—	—
5	Internet*	162	32.75	18.33	.97	−.33	−1.33	8.98	6.36	.80	1.39	1.70
6	University students*	1803	43.35	11.12	.96	−2.02	3.40	7.02	5.65	.85	2.67	4.86
6	Female	1327	44.25	10.31	.95	—	—	6.75	5.31	.84	—	—
6	Male	423	40.85	12.80	.96	—	—	7.73	6.48	.88	—	—
6	European American	1016	41.11	12.31	.96	—	—	7.45	5.80	.86	—	—
6	African American	677	47.46	6.38	.89	—	—	5.98	4.96	.85	—	—
6	Native American	39	41.17	12.69	.98	—	—	8.17	5.51	.74	—	—
6	Hispanic/Latino	34	40.20	13.10	.96	—	—	8.85	5.76	.66	—	—
6	Asian	28	38.16	13.89	.95	—	—	10.32	8.14	.87	—	—
6	International	9	17.00	15.50	.97	—	—	13.67	10.48	.75	—	—
6	Christian	557	45.51	8.07	.93	—	—	6.54	5.36	.87	—	—
6	Baptist	492	46.92	6.56	.90	—	—	5.91	4.24	.81	—	—
6	Protestant	251	44.52	8.96	.93	—	—	7.17	5.98	.85	—	—
6	Catholic	262	41.60	10.51	.95	—	—	8.71	6.33	.85	—	—
6	Muslim	6	45.00	10.84	—	—	—	5.17	1.83	—	—	—
6	Jewish	4	47.50	3.32	—	—	—	4.00	.00	—	—	—

Table 2 (*continued*)

Study	Description	n	Positive					Anger				
			M	SD	Alpha	Skewness	Kurtosis	M	SD	Alpha	Skewness	Kurtosis
6	Buddhist	7	25.15	17.66	—	—	—	6.71	5.96	—	—	—
6	Hindu	3	44.33	9.81	—	—	—	22.67	17.50	—	—	—
6	Other religion	39	27.87	18.24	.98	—	—	10.21	8.48	.84	—	—
6	Agnostic	41	18.24	12.87	.94	—	—	11.07	7.71	.81	—	—
6	No religion	56	21.58	16.22	.96	—	—	8.36	6.72	.84	—	—

Note. — Indicates not sufficient sample size to calculate.
* Indicates the full sample.

subscales. Positive Attitudes toward God were significantly but only moderately correlated with Disappointment and Anger with God, $r(190) = -.15$, $p = .05$, justifying the decision to use Varimax rotation for orthogonal factors. Women had more positive attitudes toward God than men ($r = .20$, $p < .05$). Also, when ethnicity was coded as Caucasian $= 1$ and all others $= 0$, ethnicity was correlated with positive attitudes toward God ($r = .20$, $p < .05$). Anger at God was not related to age, gender or ethnicity. The independence of the subscales was supported.

Study 1b: Principal components analysis. To evaluate whether the factor structure from Study 1a would replicate, we used the other half of the split sample. Our aim was to conduct another PCA (Varimax rotation) on the ATGS-9 items ($N_{1b} = 201$). See Table 1 for demographic data and Table 2 for normative data. As in Study 1a, we first assessed the data for suitability for factor analysis. Assumptions were met, and we thus proceeded with the analysis.

We used the same criteria for retaining items as in Study 1a (load $> .75$ on a factor and not more than .2 on the other factor). All nine items met retention criteria. The first component, consisting of the five items on positive attitudes, accounted for 49.3% of common variance ($M = 32.4$, $SD = 16.9$). The second component, which had the four items on Disappointment and Anger with God, accounted for 29.3% of common variance ($M = 6.2$, $SD = 7.4$). The rotated solution revealed a simple two-factor structure, and all items loaded on their original factors. Means, standard deviations, factor loadings, and communalities for each item are reported in Table 3 (right side columns).

Alphas and subscale correlations. In Table 2, we list alphas for the ATGS-9 items used in Study 1b ($N_2 = 201$). Across the six studies reported in the present article, alpha ranged from .64 to .98 (with all but two above 0.8). The Positive Attitudes subscale was not significantly correlated with Disappointment and Anger with God, $r(198) = -.12$, $p = .09$. We tested again whether scores on the Positive Attitudes and on the Disappointment and Anger with God subscales were related to participant demographics. Neither of the subscales was related to age nor ethnicity, but women reported more positive attitudes toward God than did men in both Studies 1a and 1b.

Table 3

Items, Factor Loadings, Item Means, Standard Deviations, and Communalities for the Attitudes Toward God Scale−9 (Study 1a)

	Study 1a					Study 1b				
Item	Factor 1 (positive attitudes)	Factor 2 (anger)	M	SD	h^2	Factor 1 (positive attitudes)	Factor 2 (anger)	M	SD	h^2
To what extent do you currently:										
Trust God to protect and care for you	**.93**	−.11	6.73	3.51	.89	**.91**	−.06	6.73	3.51	.83
Feel angry at God	−.05	**.86**	1.61	2.30	.73	.02	**.79**	1.61	2.30	.63
Feel that God has let you down	−.04	**.89**	1.64	2.40	.78	−.05	**.87**	1.64	2.40	.77
View God as unkind	−.15	**.76**	1.16	1.95	.60	−.12	**.82**	1.16	1.95	.69
View God as all-powerful and all-knowing	**.92**	−.01	7.31	3.62	.85	**.90**	−.01	7.31	3.62	.81
Feel loved by God	**.96**	−.05	6.86	3.55	.92	**.94**	−.02	6.86	3.55	.89
Feel supported by God	**.96**	−.07	6.39	3.62	.92	**.95**	−.10	6.39	3.62	.92
Feel nurtured or cared for by God	**.93**	−.13	6.16	3.59	.88	**.92**	−.11	6.16	3.59	.86
Feel abandoned by God	−.02	**.82**	1.56	2.16	.68	−.07	**.82**	1.56	2.16	.68

Note. Values in boldface type are factor loadings at or above the criteria for selection. Factor loadings: 1 = Positive Attitude toward God; 2 = Disappointment and Anger with God. The exploratory factor analysis is for the 9 items retained after eliminating items from the Attitudes toward God Scale−11. Each item is rated with a 11-point Likert-type scale with 0 = *Not at all true of me* to 10 = *Extremely true of me.*

Study 2: Confirmatory Factor Analysis of ATGS-9 in Addition to Validity Data

The purpose of Study 2 was to subject the two-factor structure of the ATGS-9 to confirmatory factor analysis (CFA) and to provide some evidence for construct validity. First, because the Positive Attitudes toward God subscale emphasized feelings of love, trust, and nurturance related to God, we expected the Positive Attitudes subscale to show strong positive correlations with measures related to secure attachment (see Kirkpatrick, 2004, for summaries), namely, religious belief salience, religious participation, and positive religious coping. We also expected modest positive correlations between Positive Attitudes scores and adjustment in the form of higher optimism (Sim & Loh, 2003), higher dispositional forgiveness (Davis, Hook, & Worthington, 2008), and lower anger and depression (Kirkpatrick & Shaver, 1990). Based on earlier research suggesting links between anger with God and emotional distress (Exline & Martin, 2005), we also predicted that the Disappointment and Anger with God subscale would correlate with more negative religious coping, lower dispositional forgiveness, and greater anger and depression.

Method

Participants and procedure. Volunteers (N_2 = 93) were students from introductory psychology courses at a private, urban university in the Great Lakes Region of the United States. All received partial course credit for participation. See Table 1 for demographic information.

Instruments.

ATGS-9. The ATGS-9 was administered within a packet of questionnaires concerning personal self-descriptions. Several (see below) but not all were related to religion.

Belief salience. Belief salience was assessed using the five items from Blaine and Crocker's (1995) religious belief salience measure, which was in turn adapted from two well-validated measures: King and Hunt's Religiosity Salience-Cognition scale (1975) and the Intrinsic subscale of the Religious Orientation Scale (Allport & Ross, 1967). Items were rated on a seven-point Likert-type scale (1 = *strongly disagree*; 7 = *strongly agree*). A sample item was, "Being a religious person is important to me." The scale is scored by averaging across items (M = 22.4, SD = 9.2, α = .94).

Religious participation. A religious participation measure from Exline et al. (2000) was abbreviated for use in this study. Participants

rated how frequently they had engaged in each of several activities in the past month: praying or meditating; use of religious/spiritual books or media; attending religious/spiritual meetings; thinking about religious/spiritual issues; and talking to others about religious/spiritual issues. Items were rated from $0 = $ *not at all* to $5 = $ *more than once a day*. Scales were scored by averaging across items ($M = 19.5$, $SD = 13.1$, $\alpha = .86$). Similar measures have been used in other studies (e.g., Exline, Baumeister, Bushman, Campbell, & Finkel, 2004; Martin, 2008).

Religious coping. We assessed positive and negative religious coping using the Brief RCOPE (Pargament et al., 2000). This scale consists of 14 items that assess various religious coping strategies categorized as negative ($M = 13.4$, $SD = 19.7$, $\alpha = .83$) or positive ($M = 43.5$, $SD = 37.8$, $\alpha = .92$). A sample positive strategy is "I sought God's love and care;" a sample negative strategy is, "I wondered whether my church had abandoned me." Participants endorse agreement on a Likert scale from $1 = $ *not at all* to $4 = $ *a great deal*. The RCOPE has been validated in a variety of samples including the medically ill, older adults, and college students (Pargament et al., 2000).

Anger. Trait anger was assessed with a 20-item scale (the STAX-I) by Spielberger, Jacobs, Russell, and Crane (1983). The measure uses a four-point rating scale ($1 = $ *Almost Never* to $4 = $ *Almost Always*) to items such as "I feel angry" ($M = 42.6$, $SD = 8.5$, $\alpha = .81$). The scores on the STAX-I have been shown to be related to a variety of measures commonly related to trait anger, and the scale has been used in numerous studies.

Depression. We assessed depression with the widely used Center for Epidemiological Studies Depression Scale (CES-D; Radloff, 1977). The CES-D consists of 20 items that assess affective, vegetative, and cognitive symptoms of depression using a four-point Likert-type scale from $0 = $ *rarely or none of the time* to $3 = $ *most or all of the time*. Higher scores indicate greater endorsement of depressive symptoms. Many studies have shown support for estimated internal consistency and construct validity. The scale is scored by summing across items ($M = 21.6$, $SD = 7.7$, $\alpha = .78$).

Optimism. We assessed dispositional optimism using the Life Optimism Test (LOT;

Scheier & Carver, 1985). The LOT is composed of 12 items including four filler items that are measured along a five-point rating scale from $1 = $ *strongly disagree* to $5 = $ *strongly agree*. An example item is, "I always look on the bright side of things." Among white undergraduate samples, scores on the LOT have been reported to have good discriminant and convergent validity, 4-week estimated temporal stability of 0.79, and Cronbach's alpha of 0.76 (Scheier & Carver, 1985). In the current sample, $M = 40.8$, $SD = 9.2$, $\alpha = .90$.

Trait forgivingness. A dispositional tendency to be forgiving was assessed by the 10-item Trait Forgivingness Scale (*TFS;* Berry, Worthington, O'Connor, Parrott, & Wade, 2005*).* Items such as "I am a forgiving person" or "I feel bitter about many of my relationships" (reverse scored) are rated from $0 = $ *not at all* to $4 = $ *totally*. Berry et al. (2005) presented evidence of construct validity including EFA, CFA, and Rausch models, and alphas ranged from .8 to .9. In the present sample, $M = 35.3$, $SD = .75$, $\alpha = .89$.

Results and Discussion

Confirmatory factor analysis (CFA). In Study 2, we used Amos 6.0 (Small Waters Corp., Chicago, 2003) to do a CFA on the five positive attitude items and the four anger items. The χ^2 ($df = 27$) was 49.8, $p < .005$, indicating that the implied and observed covariance matrices were not equivalent. However, the χ^2 statistic has questionable reliability because it is heavily influenced by sample size. Many psychometricians recommend a rule of thumb of $\chi^2/df < 5$ for an acceptable fit (DeVellis, 2003; in this sample, χ^2/df was 1.85). The root mean square error of approximation (RMSEA) was .09, bordering the desired level of .08. Typically, an RMSEA above .08 indicates redundancy in items; however, we had shortened the scale to what we considered the limit, and the RMSEA was acceptable, if marginally high. The comparative fit index (CFI $= .98$) and non-normed fit index (NFI $= .95$) both indicated an acceptable fit. See Figure 1 for the model.

Alphas and subscale intercorrelations. Table 2 reports norms. Alphas were .96 (Positive Attitudes) and .85 (Disappointment and
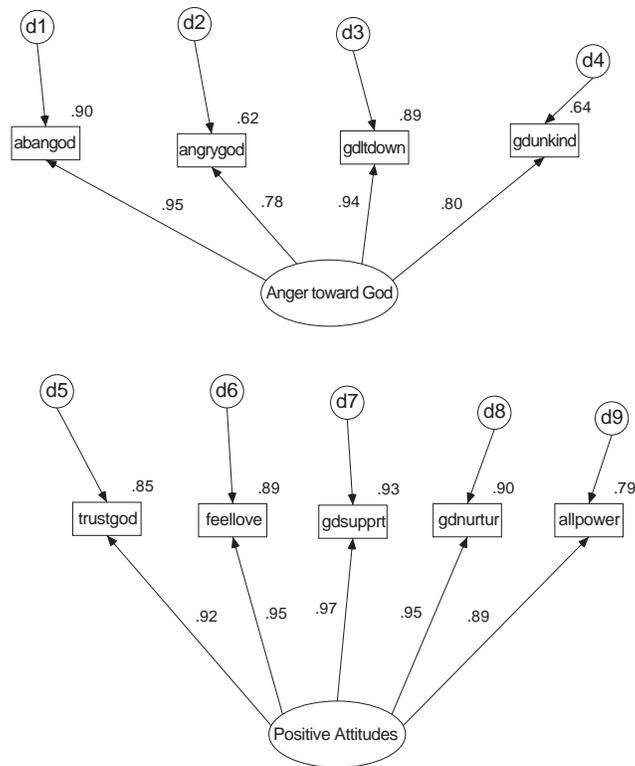
Figure 1.   Structural Equation Model Analysis Diagrams for Study 2.

Anger with God). Positive attitudes and anger did not correlate significantly, $r(93) = -.07$, *ns*.

Construct validity.   In Table 4, we report correlations. Positive attitudes toward God showed the expected high correlations with religious participation, belief salience, and positive religious coping (all $ps < .05$), but (as expected) did not correlate significantly with negative religious coping. As predicted, Disappointment and Anger with God was correlated with negative religious coping but not with the other religiosity variables.

To provide an additional test of validity, we also examined correlations between the two ATGS-9 subscales and the adjustment measures (see Table 4). Contrary to predictions, Positive Attitudes toward God was not linked with any of the adjustment measures with the exception of optimism. As hypothesized, however, disappointment and Anger with God showed clear associations with adjustment in the form of higher depression and anger and lower optimism and dispositional forgiveness.

Study 3: Two-Week Temporal Stability and Additional Construct Validity

The previous studies demonstrated a consistent factor structure and stable validity coefficients for the ATGS-9. The purpose of Study 3 was to examine temporal stability and to provide several additional tests of construct validity. In addition, Study 2 (along with Exline et al., 1999) revealed correlations between Disappointment and Anger with God and both trait anger and depression, raising the possibility that Disappointment and Anger with God might be related to a general dissatisfaction with life. Also, because negative emotions often have connections with poor physical health (Kim & Hamann, 2007; Koenig, Larson, & McCullough, 2001; McCullough, Hoyt, Larson, Koenig, & Thoresen, 2000), we predicted a modest positive correlation between Disappointment and Anger with God and physical symptoms of illness.

Table 4

Correlations Between the Positive Attitudes Toward God (PA) and Disappointment and Anger With God Subscales and Other Key Variables From Studies 2, 3, 4, and 5

	Study 2 (N = 93)		Study 3 Time 1 (N = 109)		Time 2 (N = 109)		Study 4 (N = 304)		Study 5 (N = 162)	
Variable	PA	Anger	PA	Anger	PA	Anger	PA	Anger	PA	Anger
Belief salience	.85*	−.10	.74*	−.40*	.76*	−.50*	—	—	—	—
Religious participation	.72*	−.09	.51*	−.31*	.47*	−.25*	—	—	—	—
Negative coping	.02	.59*	—	—	—	—	—	—	—	—
Positive coping	.75*	.00	—	—	—	—	—	—	—	—
Satisfaction with Life	—	—	.27*	−.39*	—	—	—	—	—	—
Trait anger	−.06	.37*	—	—	—	—	−.09	.36*	—	—
CES-D (depression)	.00	.34*	−.11	.30*	−.14	.34*	−.03	.17+	—	—
Dispositional optimism	.22+	−.46*	—	—	—	—	.04	−.06	—	—
Dispositional forgiveness	.08	−.36*	—	—	—	—	—	—	—	—
Physical symptoms	—	—	−.06	.21+	−.06	.24*	—	—	—	—
Neuroticism	—	—	—	—	—	—	—	—	.04	.16+
Agreeableness	—	—	—	—	—	—	—	—	.13	−.06
Extraversion	—	—	—	—	—	—	—	—	.10	−.12
Openness	—	—	—	—	—	—	—	—	.01	−.08
Conscientiousness	—	—	—	—	—	—	—	—	.28*	−.19+
PES	—	—	—	—	—	—	—	—	−.05	.19+

Note. CES-D = Center for Epidemiological Studies Depression Scale; PES = Psychological Entitlement Scale; — not measured.
$^+ p < .05.$ $^* p < .01.$

Method

Participants and procedure. Volunteers ($N_3 = 138$) were undergraduates from the same urban Great Lakes Region university as Study 2. All received partial course credit in introductory psychology. Participants completed questionnaire packets and returned them to the laboratory. Approximately 12 days later, they received an e-mail with the follow-up questionnaire. Of the original 138, 109 completed the follow-up questionnaire within two weeks of the original administration. When compared to noncompleters, those who did the follow-up did not differ in their scores on any Time 1 measures. See Table 1 for demographic information.

Instruments.

ATGS-9. The ATGS-9 was administered both at Time 1 and Time 2. There was one important procedural difference from the prior studies: Those who definitely did not believe in God were asked to skip the items pertaining to God. Thus, this sample was one of believers, in contrast to the other studies in which both believers and nonbelievers completed the items.

See Table 2 for norms. Alphas at Time 1 were .94 for Positive Attitudes and .88 for Disappointment and Anger with God. Time 2 alphas were .95 and .90, respectively.

Religiosity. Belief salience and religious participation were assessed with the same measures from Study 2. For belief salience, Time 1 $M = 28.0$, $SD = 14.6$, $\alpha = .95$; Time 2 $M = 25.2$, $SD = 16.0$, $\alpha = .97$. For participation, Time 1 $M = 10.8$, $SD = 7.8$, $\alpha = .84$; Time 2 $M = 9.6$, $SD = 7.6$, $\alpha = .83$.

Satisfaction with life. We used the Satisfaction with Life *Scale* (*SWLS;* Diener, Emmons, Larson, & Griffin, 1985) ($M = 24.0$, $SD = 7.9$, $\alpha = .87$), which consists of five items rated from 1 = *strongly disagree* to 7 = *strongly agree*. The scale was constructed to assess global life satisfaction, and it has shown high alphas, temporal consistency, and suitable usage with different age levels (Diener et al., 1985).

Depression. As in Study 2, the CES-D (Radloff, 1977) was used (Time 1 $M = 22.0$, $SD = 6.3$, $\alpha = .70$; Time 2 $M = 21.2$, $SD = 7.2$, $\alpha = .77$).

Physical symptoms. We used the Pennebaker Inventory of Limbic Languidness (*PILL;* Pennebaker, 1982; Time 1 M = 81.2, SD = 18.0, α = .89; Time 2 M = 76.0, SD = 17.8, α = .91), which includes 54 physical symptoms. Items are rated on frequency of occurrence from 1 = *not at all* to 5 = *daily or almost daily*. Reported alphas range from .88 to .91 with 2-month temporal stability ranging from .79 to .83 (Pennebaker, 1982).

Results and Discussion

Temporal stability. The 2-week temporal stability was acceptable for both subscales: Positive Attitudes toward God, $r(98)$ = .85, $p <$ .001 and Disappointment and Anger with God, $r(99)$ = .68, $p <$ .001.

Subscale correlations. Positive attitudes toward God showed a negative correlation with Disappointment and Anger with God both at Time 1 $r(122)$ = −.43, $p <$ .001, and Time 2, $r(98)$ = −.60, $p <$ .001. In this study, then, there was a clear negative correlation between positive attitudes and anger. (This may have been because the larger study emphasized anger and questioning toward God, which may have polarized opinions to some degree. A more likely explanation, however, is that participants in this study completed the ATGS-9 items only if they held some belief in God. In the other studies, nonbelievers usually gave low or zero ratings on all ATGS-9 items—which, in turn, lowered the correlation between the two subscales. See below for further discussion of these findings and their limitations).

Construct validity. As with the previous studies, Positive Attitudes toward God showed strong positive correlations with other indices of religiosity at both Time 1 and Time 2. (See Table 4 for details.) Also, as predicted, Disappointment and Anger with God showed negative correlations with other religiosity measures at both time points.

Discriminant validity. Positive attitudes toward God did not correlate with depression at Time 1 or Time 2, nor did they correlate with physical symptoms. As predicted, Disappointment and Anger with God was correlated with greater depression and physical symptoms at both time points.

Study 4: Reliability and Validity in a More Ethnically Diverse Student Sample

The purpose of Study 4 was to determine whether findings about the estimated reliability and construct validity of the ATGS-9 would replicate in a different undergraduate sample, one from the Northeastern United States that was more diverse in terms of ethnicity than the earlier studies. This study included measures of anger, depression, and dispositional optimism in addition to the ATGS-9.

Method

Participants and procedure. Volunteers (N_4 = 304) from a large city university in the northeastern United States (see Table 1 for demographics) completed questionnaires in return for partial or extra course credit in introductory or social psychology courses. They differed substantially in demographics from all previous university samples. Although they tended to be a bit older (M = 21.3, relative to means of approximately 19 in other samples), the striking differences were in ethnicity. In the Study 4 sample, only 9% were Caucasian (vs. 70% to 76% in the other university samples). About 31% were African American (vs. 2% to 4%), and 30% were Latino (vs. 0% to 2%). The distribution of religions was similar (though 9% were Muslim vs. about 3% in the other samples).

Instruments. The Positive Attitudes toward God (M = 37.6, SD = 15.3, α = .95) and Disappointment and Anger with God subscales (M = 4.4, SD = 7.1, α = .80), STAX-I (M = 42.8, SD = 7.3), CES-D (M = 22.4, SD = 8.2), and LOT (M = 65.1, SD = 7.6) were administered (see Study 2 for scale descriptions of the STAX-I, CES-D, and LOT).

Results and Discussion

There was a modest negative correlation between Positive Attitudes toward God and Disappointment and Anger with God. $r(304)$ = −.21, $p <$ 0.01. As shown in Table 4, positive attitudes toward God did not correlate significantly with any of the adjustment measures; Disappointment and Anger with God was positively correlated with depression and anger.

Analyses of variance (ANOVAs) were conducted to explore ethnicity-based differences in

Positive Attitudes toward God and Disappointment and Anger with God. Participants were divided into six groups based on self-identified ethnicity: European American, African American, Hispanic/Latino, Asian, Middle Eastern, and multiethnic. Data from one Native American participant were excluded because of insufficient n.

The first ANOVA revealed large differences in Positive Attitudes toward God among the six ethnic groups, $F(5, 290) = 13.45$, $p < .001$, $\eta^2 = .19$. Post hoc comparisons using the Tukey's HSD test ($p < .05$) revealed that European Americans ($M = 23.2$, $SD = 17.4$) scored lower than those who were African American ($M = 44.0$, $SD = 10.5$), Hispanic or Latino ($M = 39.6$, $SD = 11.7$), Asian ($M = 34.0$, $SD = 16.6$), and Middle Eastern ($M = 44.4$, $SD = 13.9$). African Americans ($M = 44.0$, $SD = 10.5$) scored higher than Asian ($M = 34.0$, $SD = 16.6$) and multiethnic ($M = 27.4$, $SD = 20.9$) participants. Finally, Hispanic/Latino participants ($M = 39.6$, $SD = 11.7$) scored higher than those who were multiethnic ($M = 27.4$, $SD = 20.9$). The second ANOVA revealed no differences in Disappointment and Anger with God among the six ethnic groups, $F(5, 290) = 1.04$, ns.

Study 5: ATGS-9 and Personality Traits

Study 5 investigated associations between the ATGS-9 subscales, the Big Five personality traits, and entitlement. Online data collection allowed comparison with paper-and-pencil administration of the ATGS-9. We predicted that scores on the Big Five traits would be related to the ATGS-9 subscales as described below.

Big Five, Entitlement, and Religion

Saroglou (2002) conducted a meta-analysis of Big Five personality traits versus three measures of religion—general religiosity, open, mature religion and spirituality, and religious fundamentalism. General religiosity was related to greater conscientiousness, agreeableness, and extraversion. Open, mature religion and spirituality was related modestly to all five traits, although the largest effect size was with openness to experience. Neuroticism was negatively related to open, mature religion and spirituality. Based on these findings, we predicted that positive attitudes toward God would be related to

both greater conscientiousness and agreeableness. We expected Disappointment and Anger with God to correlate with greater neuroticism and lower conscientiousness. An earlier investigation (Exline et al., 2004) revealed that entitlement was linked with slightly lower religiosity (Study 1: $r = -.17$, $p < .05$; Study 3, $r = -.14$, $p < .10$), and we expected to see a similar association here.

Method

Participants. Volunteers ($N_5 = 162$) were undergraduates at the same university from Studies 1a, 2, and 3. (Table 1 reports demographics). All received partial course credit in introductory psychology for participation.

Instruments.

ATGS-9. The ATGS-9 was measured as in earlier studies. Alphas were .97 for Positive Attitudes toward God and .80 for Disappointment and Anger with God. See Table 2 for norms.

Psychological entitlement. We included the Psychological Entitlement Scale (PES; Campbell, Bonacci, Shelton, Exline, & Bushman, 2004), a nine-item scale using a seven-point Likert-type scale (1 = *strong disagreement* to 7 = *strong agreement*). A sample item is "I honestly feel I'm just more deserving than others." The scale has shown good convergent and discriminant validity, temporal stability of .72 over one month and .70 over two months. In this sample, $M = 23.6$, $SD = 10.6$, $\alpha = .87$.

Brief Big 5 measure. We assessed the Big Five with the Ten-Item Personality Inventory (TIPI; Gosling, Rentfrow, & Swan, 2003), which includes two items for each component (Neuroticism $M = 6.5$, $SD = 2.7$; Conscientiousness $M = 9.8$, $SD = 2.8$; Agreeableness $M = 10.0$, $SD = 2.3$; Openness $M = 10.4$, $SD = 2.6$; Extraversion $M = 8.9$, $SD = 3.2$). The scale has shown good convergent and discriminant validity and estimated 6-week temporal stability of 0.72 (Gosling et al., 2003).

Results

Discriminant validity. In Table 4, we summarize correlations. There was a significant correlation between Positive attitudes toward God and conscientiousness, as hypothesized. Positive attitudes toward God did not correlate

with agreeableness (contrary to predictions) or any of the other personality measures. As predicted, however, Disappointment and Anger with God did show the expected small correlations with higher entitlement and neuroticism and lower conscientiousness.

Study 6: Norms for ATGS-9

The purpose of Study 6 was to contribute to norms for the ATGS-9 for a college sample from another region of the United States (Southeast). This sample was also larger than the ones used in the prior studies, which provided a good opportunity to see whether ATGS-9 scores differed based on the demographic factors of gender and ethnicity.

Procedure

Participants (N_6 = 1803) were recruited from a large public state university from the southern United States. They completed questionnaires in return for partial credit in introductory psychology. In Table 1, we report demographics. The age of the sample (M = 20.7) was similar to Study 4 and slightly older than the other studies. The Study 6 sample was comprised of a higher proportion of African American respondents (36.3%) than the other studies. Most respondents (54.5%) were Caucasian.

Instruments

ATGS-9. The ATGS-9 was measured as in earlier studies. See Table 2 for norms. Alphas were .96 for Positive Attitudes toward God and .85 for Disappointment and Anger with God.

Results

We performed two 2 × 2 (Men vs. Women × African American vs. European American) ANOVAs, one predicting positive attitudes toward God and the other predicting Disappointment and Anger with God. There were no significant interactions. On the Positive Attitudes toward God subscale, women (M = 44.3, SD = 10.3) scored higher than men (M = 40.9, SD = 12.8), $F(1, 1625)$ = 19.85, $p < .001$, partial η^2 = .01. On Disappointment and Anger with God, women (M = 6.8, SD = 5.3) scored

lower than men (M = 7.7, SD = 6.5), $F(1, 1625)$ = 6.15, $p < .05$, partial η^2 = .004.

There were significant differences based on ethnicity as well. On the Positive Attitudes toward God subscale, African American students scored higher (M = 47.5, SD = 6.4) than European American students (M = 41.1, SD = 12.3), $F(1, 1625)$ = 110.31, $p < .05$, partial η^2 = .06. On the Disappointment and Anger with God subscale, African American students had lower scores (M = 6.0, SD = 5.0) than European American students (M = 7.5, SD = 5.8), $F(1, 1625)$ = 16.66, $p < .05$, partial η^2 = .01. No other ethnic differences were found.

Additionally, Baptists reported more positive attitudes toward God (M = 9.4, SD = 1.3) than Catholics (M = 8.3, SD = 2.1), $F(1, 756)$ = 73.37, $p < .05$, η^2 = .09. Catholics also reported more Disappointment and Anger with God (M = 2.2, SD = 1.6) than Baptists (M = 1.5, SD = 1.1), $F(1, 756)$ = 53.14, $p < .05$, η^2 = .07.

The results of Study 6 revealed some variations in people's record of Positive Attitudes toward God and Disappointment and Anger with God based on gender, ethnicity (African American vs. European American), and religious denomination (Catholic vs. Baptist). More research needs to be conducted to examine other religious group and ethnicities/races.

General Discussion

Our goal in this research was to develop and evaluate a brief measure of both Positive Attitudes toward God and Disappointment and Anger with God. We labeled this new, nine-item measure the Attitudes toward God Scale (ATGS-9). In the present article, we presented evidence of the psychometric adequacy of the scores of the two subscales of the ATGS-9: Positive Attitudes toward God and Disappointment and Anger with God. The evidence came from university students from three regions in the United States, all of which differed from each other in terms of demographic variables. Participants in the samples representing varied religious backgrounds including denominations of Christianity, Judaism, Islam, Hinduism, and Buddhism as well as individuals who did not believe in God.

Multiple criteria were employed to compute estimated reliability and adduce evidence for construct and discriminant validity of the two subscales. The studies provided strong evidence that scores on both subscales are valid and measure distinct, albeit moderately correlated constructs, especially in participants who are religious. With people who do not advocate religion, the subscale scores are generally uncorrelated with each other. For highly religious samples, both subscales on the ATGS-9 should be analyzed separately because they may tell a different story for religious and nonreligious participants, though they might also be considered in light of each other. Our studies suggest that the scores on the ATGS-9 show good estimated reliability and construct validity for use in undergraduate populations in the United States. Further tests are needed to assess the efficacy of the instrument in other settings.

Positive Attitudes Toward God and Disappointment and Anger With God: Key Findings

As assessed by the ATGS-9 subscales, positive attitudes toward God showed strong, consistent positive links with other indices of religiosity such as belief salience, religious participation, and positive religious coping (but not so strong as to be capturing the same construct). Disappointment and Anger with God, on the other hand, was linked with negative religious coping styles, less religious participation, and poorer adjustment (e.g., greater anger, depression, entitlement, and physical symptoms; less optimism and satisfaction with life). In other words, whereas positive attitudes toward God were experienced largely within the realm of religious belief and practice, Disappointment and Anger with God was associated with measures of physical and mental adjustment that were outside the domain of religion. This finding is consistent with prior research suggesting that spiritual struggles, including anger with God, are linked with mental and sometimes physical struggles as well (e.g., Exline et al., 1999, 2000, 2009; Fitchett et al.,1999; Pargament et al., 2001, 2004). Nonetheless, there is hope that working through these struggles could ultimately lead to personal and spiritual growth (see Exline & Rose, 2005; Pargament, 2007).

In Study 2, positive attitudes toward God were closely linked with secure attachment to God. Although positive attitudes and secure attachment are similar concepts, we propose that they are not the same—either conceptually or in practical terms of measurement. Secure attachment involves a lack of both avoidance and anxiety focused on an attachment figure. Using Rowatt and Kirkpatrick's (2002) or Beck and McDonald's (2004) measure of attachment to God, secure attachment would be indicated by low scores on both anxious and avoidant dimensions. Thus, secure attachment is defined as the absence of two negative qualities. The ATGS-9, however, measures actual positive attitudes toward God. These scales, we believe, could be used in a complementary way. The absence of illness is not necessary health, and similarly, the absence of anxiety and avoidance toward God does not necessarily translate into a positive emotional connection. The Broaden and Build Model of emotions (Fredrickson, 2001) has shown how important it is to assess the positive emotional experience in tandem with the absence of negative experience.

The Disappointment and Anger with God subscale provides an important tool for advancing research in the study of spiritual struggle. The measure is brief (four items) and should be easy to administer. In addition, the studies presented here show evidence for the measure's estimated reliability and validity across several college samples. We note parenthetically that the other strain-related items from the longer Religious Comfort and Strain measure (which we dropped at the outset to provide the focused instrument reported in the current research) and the RCS, as used previously in its larger form, may have substantial utility for research (e.g., Yali, Rapkin, & Exline, 2009), a possibility that we will explore in a future article.

Practical Implications, Limitations, and Directions for Future Research

In this set of studies, we did preliminary work to examine norms across different samples of college students. In both conceptual and practical terms, continued assessment of the ATGS-9 within different populations will be important, especially given that we found some demographic differences. For example, there was some evidence that women and African Amer-

icans scored higher on the Positive Attitudes subscale and lower on the Disappointment and Anger with God subscale than did men and European Americans, respectively. Additionally, Catholics reported less positive attitudes toward God and more disappointment and anger with God when compared with Baptists. Potential users of the measure are cautioned that scores may differ based on demographic variables, including some that were not included in this preliminary set of studies. Clearly, more research will be needed to establish norms in different demographic samples.

Additional research is needed to articulate further evidence of the validity of the subscale scores, especially on the Disappointment and Anger with God subscale. Construct convergent and discriminant validity were assessed by examining correlations between this scale and religious, personality, and psychological adjustment variables (see Table 4). Moderate correlations between Disappointment and Anger with God with variables such as depression, anger, and satisfaction with life may reflect preexisting dysfunction as opposed to a distinct association between these variables. Thus, we interpret our findings circumspectly. The evidence supporting the construct validity of the subscale scores may not be as strong as the evidence might at first blush suggest.

Though the correlations did not completely overlap, it will be important to clarify in future studies the boundaries between Disappointment and Anger with God with religious, personality, and psychological adjustment variables. One way to help bolster the evidence for the construct validity of the subscale scores would be to assess the predictive validity of the Disappointment and Anger with God subscale. For example, future research could assess how Disappointment and Anger with God might predict religious observance behaviors over the course of time (e.g., engaging in prayer, attending services). In the present data set, we do not have the longitudinal data to provide such criterion-related validity, but this is a priority for future research.

Another issue regarding the Disappointment and Anger with God subscale is the low mean scores across the studies. With such low scores, it is debatable how the subscale is meaningfully associated with significant aspects of religious observance and experience. The construction of

the Disappointment and Anger with God subscale has yielded a brief measure with psychometric support, an important goal for the six studies. More research is needed to determine how varying levels of Disappointment and Anger with God might have a meaningful influence on religious beliefs and practices. Future studies might examine if low levels of Disappointment and Anger with God are associated with decreases or changes in religious observances or beliefs.

A further limitation concerns the normality of distribution of the subscale scores. Of course, theoretically, we do not expect that scores on the Disappointment and Anger with God subscale will always be normally distributed. The more "normal" the sample is, the more skewed and kurtotic the distributions are likely to be (because there will be fewer people who are actively angry with God). Specifically, we computed and listed skewness and kurtosis statistics for the subscales in Table 2. It is apparent from the results that the skewness and kurtosis statistics do not indicate strictly normal distributions for every study (especially Studies 2, 4, and 6). However, the remainder of the studies did have relatively normally distributed scores on the Disappointment and Anger with God subscale. We had the choice of transforming the scores on (a) all six studies (for consistency), only the three not meeting normality assumptions (which would introduce confusion in interpreting the results), or (c) none of the studies (which promotes consistency and ease of interpretation). Analyses with log-transformed scores did not affect the results substantively, so we did not transform scores. Ultimately, we decided that the threats of kurtosis and skewness were mitigated because of the large sample size of the study (see Tabachnick & Fidell, 2001). Yet, with non-normal distributions the results of the ANOVAs conducted still must be interpreted with caution. For future researchers, it will be important to inspect the normality of the distributions in future researcher, especially when using ATGS-9 scores with parametric statistical techniques.

One important practical question is whether to have all participants complete the items, including those who do not believe in God. This was the procedure used in all of our studies except Study 3, where we asked nonbelievers to skip the items. On the surface, it may seem odd

to ask people to answer questions about God if they do not believe in God. However, because a substantial subset of people who claim not to believe in God nonetheless report anger with God (see Exline & Martin, 2005; Exline et al., 2009), we tentatively suggest that all participants be asked to complete the items, regardless of whether they currently believe in God. Based on the findings reported here, we would predict that the Positive Attitudes and Disappointment and Anger with God subscales will show moderate negative correlations in samples that include believers only; when nonbelievers are included, the correlations between the two subscales should be reduced.

Related to this issue is an additional limitation regarding the knowledge of the factor-structure of the ATGS-9. The factor analyses that resulted in a two-factor structure for the ATGS-9 were conducted with a general population including believers and nonbelievers in God. However, the subscales were significantly inversely correlated in study three which excluded nonbelievers in God. These results may suggest that the ATGS-9 has a multifactorial structure for a general population and a unifactorial structure for a population of believers in God. Possible differences in factor structure related to belief in God for the ATGS-9 cannot be ruled out until further factor analyses are conducted on populations of believers.

Conclusions

Given the growing body of research on people's perceived relationships with God and how these relationships are linked with mental and physical health, the ATGS-9 offers a unique opportunity for researchers to assess two important attitudes people may experience toward God: positive attitudes and anger. Researchers and clinicians alike may encounter situations in which they would like to conduct a brief assessment of Disappointment and Anger with God, one that is more specific than other measures such as the RCOPE (Pargament et al., 1998) but not as extensive as the measures used in studies that have anger with God as a primary focus (e.g., Exline et al., 2009).

At this point, we feel reasonably confident recommending the ATGS-9 to researchers who are studying college students. However, using such brief scales clinically should be restricted to what Richards and Bergin (2005) called Level 1 assessment of religion and spirituality. In Level 1 assessment, they suggested that therapists consider client religious and spiritual issues as part of a larger pretherapy assessment that also covers physical, social, behavioral, intellectual, educational-occupational, and psychological-emotional domains. After assessing a client's religious faith broadly, Richards and Bergin (2005) further suggested that therapists assess more specific aspects of client religious faith, using a combination of open-ended questions and standardized measures. They suggest that a Level 2 approach is appropriate for therapists of clients whose religious affiliation and beliefs are markedly different from those of the therapist.

As part of the ATGS-9, users may also find it helpful to include items on positive attitudes toward God and, where applicable, attachment to God (Rowatt & Kirkpatrick, 2002) for comparison purposes. Although more research is needed to establish norms across different populations and to evaluate construct validity with other populations besides college students, we propose that the ATGS-9 provides a solid foundation for brief assessments of positive attitudes and Disappointment and Anger with God.

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Appendix

Attitudes Toward God Scale (ATGS−9)

On a Rating Scale From 0 = "Not at All," to 10 = "Extremely," Indicate to What Extent You Currently Do or Feel the Following About God (or Whatever You Call the Sacred)

	0	1	2	3	4	5	6	7	8	9	10
Trust God to protect and care for you	0	1	2	3	4	5	6	7	8	9	10
Feel angry at God	0	1	2	3	4	5	6	7	8	9	10
Feel that God has let you down	0	1	2	3	4	5	6	7	8	9	10
View God as unkind	0	1	2	3	4	5	6	7	8	9	10
View God as all-powerful and all-knowing	0	1	2	3	4	5	6	7	8	9	10
Feel loved by God	0	1	2	3	4	5	6	7	8	9	10
Feel supported by God	0	1	2	3	4	5	6	7	8	9	10
Feel nurtured or cared for by God	0	1	2	3	4	5	6	7	8	9	10
Feel abandoned by God	0	1	2	3	4	5	6	7	8	9	10

Note. Items in regular font compose the Positive Attitudes toward God subscale. Items in **bold** comprise the Disappointment and Anger with God subscale.