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Is it better to Struggle and Resolve than to never Struggle at All? The Course and Consequences of Resolving Spiritual Struggles

Jennifer H. Wortmann
University of Connecticut, jenwortmann@gmail.com

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Jennifer Harlow Wortmann, Ph.D.

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Extensive psychological research has associated spiritual struggle with negative outcomes, including depression, post-traumatic distress, suicidality, and mortality. Yet other research has linked it with positive outcomes, such as personal and spiritual growth, less prejudice, greater compassion, and increased religious tolerance. Furthermore, religious and developmental theorists posit that spiritual struggle is *essential* to value development and life adjustment, as rigid systems are replaced by flexible ones. The paradox of struggle being associated with negative outcomes but linked to spiritual and personal growth raises the question: what distinguishes healthy or productive spiritual struggle from maladaptive struggle? The current study hypothesizes that struggle can be beneficial if it is resolved over time: by integrating benevolent views of a higher power, increasing psychological closure, and finding meaning in questioning. It is this productive struggle that exercises a "spiritual muscle," developing psychosocial resources and forging a stronger and more flexible spirituality. The study empirically tests correlates of spiritual struggle and outcomes of resolution of struggle over time in response to a writing paradigm (versus a control condition). Spiritual struggle was assessed with multiple measures to capture the multidimensionality of this construct. At baseline, participants were asked to identify an open, negative event, respond to

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questionnaires, and write over three days. At the first follow-up resolution of struggle and event-related closure were assessed. At the final follow-up, extent of resilient response to a subsequent stressor was assessed in terms of distress response, use of positive coping methods, meaning violations, and spiritual struggle. Additional general, non-event-specific outcomes were measured as well. Repeated-measures analysis of variance was used to assess changes in spiritual struggle and outcomes, and structural equation modeling of latent growth curves was used to analyze the trajectory of struggle and the relationships between resolution and outcomes. Results indicated that measures of struggle, except quest, were cross-sectionally associated with negative outcomes, particularly at follow-ups. Spiritual struggle decreased over time and closure increased for both the struggle intervention and control groups. Finally, resolved spiritual struggle, although largely unrelated to outcomes, predicted some aspects of resilient response to a subsequent stressor and greater meaning in life.

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Jennifer Harlow Wortmann

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Presented by

Jennifer Harlow Wortmann, B.A., M.A.

Major Advisor _____

Crystal L. Park

Associate Advisor _____

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Associate Advisor _____

Sarah Hodgson

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Introduction

Spirituality, understood as a search for the sacred, or more generally, for significance, is a universal phenomenon (Pargament, Smith, Koenig, & Perez, 1998; Pargament & Mahoney, 2002). Spirituality is often engaged to cope with traumatic life events, providing comfort and empowerment in stressful times (see Pargament, Desai, & McConnell, 2006). However, stressful life events, along with "internal developmental changes," are capable of initiating spiritual struggles and demanding efforts to resolve such struggles (Pargament, 2007, p. 110).

Spiritual struggles have been defined as "signs of spiritual disorientation, tension, and strain" (Pargament, 2007, p. 112) and involve cognitive and emotional responses, such as doubt and anger. Spiritual struggles encompass interpersonal, intrapersonal, and divine categories (Pargament, Murray-Swank, Magyar, & Ano, 2005), including conflict with religious others[1], questioning, guilt, and perceived distance from or negative views of a higher power. When an event calls into question the view of a higher power as benevolent and powerful, struggle ensues.

Struggles may also be reflected in negatively-valenced methods of religious coping to make meaning of an event (Pargament, Koenig, & Perez, 2000), such as reappraisals of God's power or benevolence, generally termed "efforts to conserve or transform a spirituality that has been threatened or harmed" (Pargament, Desai, & McConnell, 2006, pp. 124-125) or efforts to understand evil and suffering (Bryant & Astin, 2008). Negative religious coping methods can be considered efforts to resolve

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[1] For an excellent discussion of definitions of religiousness and spirituality, see Zinnbauer and Pargament (2005).

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more general spiritual struggles (e.g., Pargament, 2007) or are sometimes considered evidence of struggle itself.

Spiritual struggles may be unwanted strain triggered by external life events, or they may be purposeful efforts to understand the complexities of life or a chosen approach to faith (e.g., "quest" orientation to religion; Batson, Schoenrade, & Ventis, 1993). Struggles may be transient or prolonged (Pargament, 2007), although little research has demonstrated a variable time course to struggle and its long-term consequences (Exline & Martin, 2005; cf., Hunsberger, Pratt, & Prancer, 2002; Phillips & Stein, 2007). A single longitudinal study of spiritual struggle in medically ill elderly patients indicated that chronic strugglers, compared to non-strugglers, declined in mental and physical health over two years (Pargament, Koenig, Tarakeshwar, & Hahn, 2004). Transitory and acute strugglers did not experience these negative outcomes compared to non-strugglers.

Spiritual struggles and negative religious coping efforts are usually associated with negative outcomes (Ano & Vasconcelles, 2005), including distress, depression, and suicidality (e.g., Bryant & Astin, 2008; Edmondson, Park, Chaudoir, & Wortmann, 2008; Exline, Yali, and Sanderson, 2000). Struggle is also associated with maladaptive responses to traumatic or stressful events, including greater post-traumatic distress symptomatology (e.g., Aflakseir & Coleman, 2009; Conners, Whiteside-Mansell, & Sherman, 2006; Harris et al., 2008; Wortmann, Park, & Edmondson, 2011). Whereas spirituality provides a meaning framework for responding to life's stressors (Park, 2005), spiritual struggle reflects a meaning system "in tension and flux" (Pargament, Desai, & McConnell, 2006, p. 124) that, when disrupted, fails to defend against existential threats.

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Spiritual struggle, however, has also been linked to some positive stress-induced outcomes, including personal and spiritual growth among explicitly religious samples (Pargament, Smith, et al., 1998; Proffitt, Cann, Calhoun, & Tedeschi, 2007; Rosmarin, Pargament, & Flannelly, 2009) as well as college students (Pargament et al., 2000; c.f., Bryant & Astin, 2008; Pargament, Ensing, Falgout, & Olsen, 1990; Pargament, Smith, et al., 1998). Struggle may be not only a mechanism through which growth occurs from trauma (Pargament et al., 2006) but, as religious and developmental theorists posit, essential to spiritual development and life adjustment (e.g., Batson et al., 1993; Erikson, 1968; Hall, 1986; James, 1902/1936; Perry, 1968; Smucker, 1996). Pargament (2007) summarizes the core of such religious arguments: "the deepest faith is fashioned in the workshop of question and doubt" (p. 115).

This spiritual growth process may be particularly salient for young adults. Normative development during the college years can involve challenging one's values and beliefs (Chickering & Reisser, 1993). Limited research on religious development in college students indicates that many students experience stressful life events and crises of faith in the college years, which can lead to greater "spiritual maturity" (Holcomb & Nonneman, 2004). At the same time, religious belief change has also been linked to poorer adjustment, including depressive symptoms (Edmondson & Park, 2009).

Spiritual struggle has been linked to additional positive characteristics among young adults, including less prejudice (Altemeyer & Hunsberger, 1992), greater compassion (Batson, Eidelman, Higley, & Russell, 2001), and increased religious tolerance (Bryant & Astin, 2008). Specifically, religious value development in young adulthood may require "demolition" of "old structures" to make way for a new value

system that is more compromising and flexibly applied to changing circumstances (Chickering, 1969, p. 128). Perhaps in addition to a deeper personal faith, the consequences of struggling with one's spiritual values may include growth in cognitive flexibility and tolerance for abstractions. Chickering (1969) notes that the ability to "handle abstractions … fostered a sharp increase in [a college student's] sense of competence" (p. 26), suggesting that personal mastery may be another positive outcome of struggling.

Detailed Literature Review of Spiritual Struggle Constructs

Thorough measurement of spiritual struggle requires a broad lens encompassing multiple ways of measuring the construct. However, each sub-construct can be considered on its own; therefore, several expressions of struggle relevant to the present study are reviewed below.

Negative religious coping. Spiritual struggle has most often been researched in the form of negative religious coping in response to stressors (Ano & Vasconcelles, 2005), including efforts to search for meaning or regain comfort and closeness to God after an aversive event (Pargament et al., 2000). Negative religious coping has been shown to have an important proximal influence on well-being (Pargament, Ano, & Wachholtz, 2005) and predictive power above and beyond general measures of religiousness or spirituality (e.g., Pargament et al., 2000).

An early study of negative religious coping methods measured particular attributions to God's punishment and anger toward God in a predominantly Catholic church sample reporting a variety of stressors, a bereaved college student sample, and a sample of moderately to highly religious college students who had experienced a personal

injustice (Pargament, Zinnbauer et al., 1998). Appraisals of God's punishment were related to greater negative affect for all samples, lower self-esteem and greater trait anxiety for the church and college student injustice samples, less competence in problem solving for the college student injustice sample, and lower scores on perceived handling of the event and on positive outcomes for the church sample. It was unrelated to scores on perceived religious growth (Pargament, Zinnbauer et al., 1998).

In the same study, anger at God was related broadly to negative outcomes for both the church and bereaved samples and to lower self-esteem for the church sample only (Pargament, Zinnbauer et al., 1998). Similar findings were reported from a later investigation of medical rehabilitation inpatients: anger at God at the time of admission was related to poorer physical recovery at follow up (Fitchett, Rybarczyk, DeMarco, & Nicholas, 1999). In contrast to other findings reported below regarding perceived religious growth, however, anger at God was related to *lower* scores on religious growth for the bereaved sample described above (Pargament, Zinnbauer et al., 1998). These results suggest that there are similarities and differences by type of struggle in relations with adjustment for particular stressors.

This early research in religious coping led to the development of the RCOPE, a comprehensive measure of religious coping developed by Pargament and colleagues, which encompasses multiple methods of coping, including positive and negative dimensions. In the conceptualization of the negative religious coping dimension, the authors described it as emerging from "a less secure relationship with God, a tenuous and ominous view of the world, and religious struggle in the search for significance" (Pargament, Smith et al., 1998, p. 712).

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The RCOPE was initially validated with three samples and generally related to negative outcomes, including greater PTSD symptomatology and callousness among church members coping with the Oklahoma City bombing, poorer physical and mental health and more psychosomatic symptoms and distress among undergraduates coping with a major life stressor, and more depression and physical health problems and lower quality of life among elderly medical inpatients (Pargament, Smith et al., 1998). Negative religious coping was unrelated to positive religious coping in the trauma sample but positively related in the undergraduate and elderly sample. It was only related to spiritual growth in the elderly sample but related to stress-related growth in all the samples (Pargament, Smith et al., 1998).

Similar results were found in a later validation study of the RCOPE with college students, in which, controlling for gender and global religiousness measures, negative religious coping related to poorer physical and mental health but more spiritual and stress-related growth (Pargament et al., 2000). However, whereas earlier results with college students indicated no relation with spiritual growth, this sample reported spiritual growth along with struggle (Pargament et al., 2000). In contrast, negative religious coping in another undergraduate bereaved sample was related to distress but unrelated to stress-related growth (Park & Cohen, 1993).

The brief version of the RCOPE was also included in the General Social Survey (GSS); however, the scale showed poor internal consistency ($\alpha = .54$), which resulted in removal of one item, which referred to not involving God in coping, from further studies (Idler et al., 2003). The version of the scale in the GSS was found to correlate negatively, but weakly, with forgiveness and with both benefits and problems in one's religious

congregation (Idler et al., 2003), providing some support for the notion that struggle is inversely related to other measures of religiousness.

Methods of negative religious coping have been assessed in a number of samples coping with stressful life circumstances. In a study of hospice caregivers, ranging widely in age, appraisals of their situation as punishment or abandonment by God were associated with more depression and anxiety and less purpose in life, as well as poorer spiritual health, and predicted outcomes above and beyond what was predicted by nonreligious appraisals (Mickley, Pargament, Brant, & Hipp, 1998). Among parents of children with autism, negative religious coping was related to more depression and, marginally, more anxiety, as well as *less* closeness to God or the church and *less* spiritual growth (Tarakeshwar & Pargament, 2001). Struggle was unrelated to positive religious coping, attendance, and prayer, and related to lower self-rated religiosity in that sample.

Among college students who had experienced parental divorce as teenagers, a composite measure of negative religious coping cross-sectionally related to appraisals of blame and loss, distress, and depressive symptoms (Warner, Mahoney, & Krumrei, 2009). Negative religious coping was positively correlated with positive forms of religious coping, but it was not related to post-traumatic growth or spiritual growth.

A more recent study assessed the relationship between negative and positive religious coping in more detail. Among Protestant church members, experiencing a greater number of negative life events in the past year was related to using more positive *and* negative coping (Bjorck & Thurman, 2007). This finding is consistent with the stress mobilization hypothesis of coping resources, which posits that individuals under stress will use the range of available resources to cope (Pargament, 1997). In this sample, the

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mean number of negative life events reported in the past year was 4, with a range from 0

to 32, and the mean score on depressive symptoms was mild to moderate (2 out of a

possible 5). As expected, negative religious coping related to greater depression and less

satisfaction with life; however, positive religious coping reduced the impact of struggle

and depression, indicating that positive and negative coping may interact to influence

outcomes (Bjorck & Thurman, 2007).

Among religious individuals, expressing spiritual discontent may qualify as an

effort to gain comfort or closeness to God, in the context of religious traditions that favor

honest expression of feeling to God (Pargament et al., 2000). For instance, in a small

sample of Christian and Jewish clergy, negative religious coping was unrelated to

positive religious coping, psychological well-being, or rumination, but was related to

greater post-traumatic growth (Proffitt et al., 2007).

The salience of religion in coping could have benefits or damaging consequences.

For instance, a national sample comparing Protestant clergy to elders and members of the

denomination found that, although positive religious coping was a greater benefit to

clergy than to others, negative religious coping was more strongly associated with

reduced positive and increased depressive affect among clergy (Pargament, Tarakeshwar,

Ellison, & Wulff, 2001). Struggle was unrelated to reports of religious satisfaction.

In a study of 814 Protestant Christian clergy members coping with the 9/11

terrorist attack, negative religious coping was assessed in terms of "doubting God's

existence, wondering why God permits evil, and feeling angry with God" (Meisenhelder

& Marcum, 2004, p. 550). This measure of struggle, although it confounds coping with

doubt, was related to the clergy feeling closer to God and the church, perhaps because of

their honest expression, which led to increased perceptions of closeness. At the same time, struggling was related to greater post-trauma symptoms of numbness and evasion, controlling for age, gender, and non-religious active coping activities (Meisenhelder & Marcum, 2004).

Trauma. Some studies have assessed the relationship between negative religious coping and post-traumatic distress specifically. In a community sample of people, mostly African-American, who had lost a family member to homicide, spiritual struggles, such as pleading to God for a miracle and expressing spiritual discontent, were associated with greater PTSD symptoms and distress (Thompson & Vardaman, 1997).

In a study using a community sample ($N = 327$) of Christian church members who had experienced at least one traumatic event, a principal components analysis of Exline's strain scale (see below; Exline et al., 2000) and negative religious coping from Pargament's brief RCOPE (Pargament et al., 2000) produced a combined "Religious Strain" factor. This strain factor was related to less social support and to higher PTSD symptoms but unrelated to post-traumatic growth after controlling for social support and positive religious coping (Harris et al., 2008). Regarding other measures of religiousness, negative religious coping was unrelated to use of prayer to calm and focus oneself or to positive religious coping, and was related to greater use of prayer to defer or avoid (Harris et al., 2008).

Some studies have investigated struggle as a mediator. Among victims of floods in the Midwestern United States, negative religious coping predicted psychological distress and less religious growth six weeks after the flood but unrelated to outcomes after four months, controlling for demographic and religious variables (Smith,

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Pargament, Brant, & Oliver, 2000). Negative religious coping was not a mediator between religious salience measures and religious outcome. In contrast, in a sample of low-income African American women with a history of intimate partner violence, struggle mediated the relationship between childhood and adult abuse and PTSD symptoms; however, PTSD symptoms likewise statistically mediated the relationship between abuse and struggle (Bradley, Schwartz, & Kaslow, 2005).

In the latter sample, struggle was greater for women with more childhood trauma but was unrelated to intimate partner violence and to positive religious coping (Bradley et al., 2005), which suggests that struggle can derive from earlier negative ways of viewing the world, as opposed to coping with a current stressor. Struggle was associated with lower self-esteem and less social support, in addition to PTSD symptoms (Bradley et al., 2005). Similarly, using the short (three item) form of the negative RCOPE, struggle was associated with more distress and PTSD symptoms for women who had experienced childhood sexual abuse and who had mental health and substance use disorders (Fallot & Heckman, 2005). Greater frequency of sexual abuse in childhood related to greater struggle in adulthood.

Although most research has been conducted on individuals from Judeo-Christian backgrounds (Pargament et al., 2000), the RCOPE has been used with Muslim samples that experienced trauma. In a sample of disabled male Iranian veterans, struggle predicted PTSD symptoms after controlling for physical health, personal meaning, and social support (Aflakseir & Coleman, 2009). Among mostly Muslim refugees from Kosovo and Bosnia, of varying ages, spiritual struggle was not related to self-reported religiousness or optimism but, in a path analysis with cross-sectional data, was predicted

by experiencing trauma and predicted less dispositional hope (Ai, Peterson, & Huang, 2003).

Additional studies have linked struggle with PTSD symptoms as well as depression. Among low-income pregnant or parenting women in a residential drug treatment center, spiritual struggle predicted clinically-significant PTSD symptoms and depression, controlling for age and past-30-day drug use, and related to recent substance use (Conners, Whiteside-Mansell, & Sherman, 2006). Among military veterans diagnosed with post-traumatic stress disorder (PTSD), coping with an adverse interpersonal event by reappraising it as God's punishment, questioning God's powers, and experiencing interpersonal religious discontent, was related to greater PTSD symptom severity, state and trait anxiety, and depression after controlling for multiple demographic variables (Witvliet, Phipps, Feldman, & Beckham, 2004).

Psychopathology. Negative religious coping has received some attention in the context of serious mental illness and addiction, with mixed results. Negative religious coping (i.e., pleading with God) was associated with greater symptomatology and less sense of empowerment in individuals with serious mental illness (Yangarber-Hicks, 2004). Similarly, among young adults diagnosed with schizophrenia or bipolar disorder, reappraisals to a punishing God and reappraisals of God's power predicted self-reported distress and feelings of personal loss over time, but were unrelated to stress-related growth or psychological well-being, controlling for gender, age, and religious denomination (Phillips & Stein, 2007).

In a mostly Christian sample of college students, struggle was related to alcohol problems, through reduced spiritual well-being and through increased social motives

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(Johnson, Sheets, & Kristeller, 2008). The authors speculate that these two pathways reflect multiple meanings of struggle: as a source of distress that leads to alcohol-related coping and as a normative stage in development that involves identification with peers.

In a longitudinal study of geriatric depression patients, struggle was inversely correlated with positive religious coping and private religious practices and related to more depression cross-sectionally (Bosworth, Park, McQuoid, Hays, & Steffens, 2003). After six months, the relationship between baseline struggle and follow-up depression scores was negative but only significant at the trend level (Bosworth et al., 2003), providing small support for the notion that struggling is an effort to make meaning that, when resolved, can result in successfully-made meaning and positive outcomes.

Medical illness. Negative religious coping has also been investigated in a variety of medical populations. From a national sample, negative religious coping in the subsample of 253 adults who reported experiencing a serious injury or illness in the past year was related to poorer mental health in a variety of domains, including anxiety, depression, paranoid ideation, and somatization, as well as decreased social support (McConnell, Pargament, Ellison, & Flannelly, 2006). Struggle was unrelated to measures of religiousness, including attendance, prayer, and self-rated religiosity (McConnell et al., 2006).

Among medically ill, hospitalized older adults, reappraisals to a punishing God or evil forces and expressing spiritual discontent were related to more depression and to worse physical health and quality of life; however, the authors reported that the relations of positive religious coping with better mental health were stronger than the association of struggle with negative outcomes (Koenig, Pargament, & Nielsen, 1998). Longitudinal

investigations extended these findings, relating negative religious coping to later mortality risk (Pargament, Koenig, Tarakeshwar, & Hahn, 2001) and chronic negative religious coping with poorer quality of life and increased depression (Pargament et al., 2004). Specifically in the latter sample, medically ill elderly adults who struggled spiritually with their illness at baseline and follow-up declined in quality of life and became more depressed and physically dependent. Transitory strugglers (i.e., those who endorsed some struggle at baseline but not at follow-up) did not have greater negative outcomes at follow-up than those who never struggled. In one exception to the negative outcomes, reappraisals to evil forces related to more spiritual growth and closeness to God (Pargament et al., 2004).

In cancer patients, negative religious coping has been related to greater depression, pain, anxiety, fatigue, and poorer mental and physical health (Cole, 2005; Sherman, Simonton, Latif, Tricot, & Spohn, 2005). Others have investigated the independent contribution of particular methods of negative religious coping among women with breast cancer. Findings suggest that spiritual discontent prior to cancer surgery related to post-traumatic growth two years after surgery (Gall, Charbonneau, & Florack, 2009). In other analyses, spiritual discontent was also related to lower emotional well-being around the time of surgery and to greater depressive, anxious, and angry affect concurrently at one year post-surgery (Gall, Guirguis-Younger, Charbonneau, & Florack, 2009). Furthermore, increases in spiritual discontent were associated with greater distress and less well-being around the time of the surgery (Gall, Guirguis-Younger et al., 2009).

Others have studied medical rehabilitation patients over time. Negative religious coping at admission was related to higher depression scores cross-sectionally and over time, and to less life satisfaction and poorer recovery at follow up, the latter analysis controlling for physical health and depression at admission, race, and social support (Fitchett et al., 1999), indicating the robust predictive power of struggle for mental and physical health. Notably, the sample included patients between 29 and 86 years of age, and younger patients struggled more. Struggle was negatively correlated with positive religious coping and with public and private religious activities. A later cross-sectional study involving patients with diabetes, congestive heart failure, or cancer replicated previous findings regarding poorer mental health and the negative correlation of struggle with age and public religious practices; however, struggle positively related to positive religious coping (Fitchett, Murphy, Kim, Gibbons, Cameron, & Davis, 2004).

Negative attitudes toward God. The religious strain scale (Exline et al., 2000) was created to assess three dimensions of struggle. The fear and guilt dimension reflects "preoccupation with one's sin" and feeling unforgiven by God. Religious rifts refer to negative social interactions with religious people. Finally, alienation from God encompasses negative feelings about God and views of God as an untrustworthy, cruel, and abandoning figure. Items from the strain scale were ultimately published as the Attitudes toward God Scale (ATGS-9; Wood et al., 2010), which contains two subscales: positive views and disappointment or anger with God (for the latter, Cronbach's $\alpha=.85$). The positive and negative subscales did not correlate with each other. Anger at God correlated with negative religious coping from the brief RCOPE and with trait anger and depressive symptoms. The negative views scale and the original strain scale reflect a

religious experience and set of views that are negative in valence and theoretically distressing, yet the scale does not confound distress itself with these views.

A qualitative exploratory study of religious struggles in PTSD (Exline, Smyth, Gregory, Hockemeyer, & Tulloch, 2005) provided support for the salience of struggle in the context of trauma. In five of 43 essays written by 15 individuals diagnosed with PTSD, three-quarters of whom were moderately or highly religious, negative religious references were spontaneously mentioned, including shaken faith and negative references to God. Although these expressions of spiritual struggle were not correlated with distress, they were related to increased arousal symptoms (Exline et al., 2005).

Earlier work that preceded the development of the strain scale includes an investigation of difficulty forgiving God. Among undergraduate students, difficulty forgiving God predicted higher anxiety and depression scores, after controlling for difficulty forgiving oneself or others (Exline, Yali, & Lobel, 1999). Difficulty forgiving God was associated with trait anger and feelings of alienation from God (Exline et al., 1999).

Results from a 20-item version of the strain and comfort scales were reported for a college student sample and a clinical sample of adults seeking outpatient psychotherapy. Controlling for level of religiousness, struggle related to greater depression and to suicidal ideation (Exline et al., 2000). A study that used items from the earlier strain scale also found struggle to be related to depression in individuals with congestive heart failure (Edmondson et al., 2008).

In the trauma-exposed community sample study cited above (Harris et al., 2008), the strain scale (not the strain factor that was generated) was related to less use of prayer

to calm and focus oneself, and greater use of prayer to defer or avoid. Internal reliability

alpha was low for the interpersonal subscale but acceptable for the fear and guilt (.70)

and alienation (.82) subscales. Notably, the religious fear and guilt subscale correlated

positively with positive religious coping. This finding may simply reflect the use of

coping methods available to a religious individual struggling with fear and guilt

(Pargament, 1997). Exline noted that religious strain may coexist with comfort (Exline et

al., 2000), and the nonsignificant correlation in this study indicates the constructs are

orthogonal (Harris et al., 2008).

Doubt. Religious doubt has been defined in various ways. It has been described

as "a feeling of uncertainty toward, and a questioning of, religious teachings and beliefs"

(Hunsberger, McKenzie, Pratt, & Pancer, 1993, p. 28). The Spirituality in Higher

Education project has referred to doubts as skepticism (e.g., disbelief that God created the

world and in an afterlife) and differentiated doubting from seeking and secure spiritual

views (Astin et al., 2004). Others have defined "emotional atheism" as disbelief in God

while retaining anger towards God (Exline & Rose, 2005). In fact, anger at God and

doubt in God's existence have been positively correlated (Exline, 2009).

Altemeyer and Hunsberger (1992, 1997) have measured doubt in terms of to what

extent a person has "had doubts about religion because of such things as the evil and

unfair suffering in the world, the bad things religions did in the past, and the death of a

loved one" (Altemeyer & Hunsberger, 2005, p. 378). Respondents are asked how often

they have experienced "the feeling that religion didn't really make people better; people

who went to church were still unkind, cheated on others, etc. but pretended they were

better'' and ''the feeling that the overall religious teachings are contradictory or that they

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don't make very much sense" (Gauthier, Christopher, Walter, Mourad, & Marek, 2006, p. 144). Hence, the scale may confound the specific content of the doubts with the *cause* of the doubts.

Hunsberger and colleagues (Hunsberger, Alisat, Pancer, & Pratt, 1996) collected the content of doubts in a qualitative study and organized them into the following categories: doubting God's existence, the problem of evil and suffering, problems with organized religion and their truth claims, "minor concerns" about disagreements with specific teachings or about religion's reputation, and a miscellaneous category that included lack of certainty about beliefs and awareness of one's own behaviors that were in conflict with church teaching. The authors coded and scored the qualitative responses on integrative complexity, defined as differentiation and integration of ideas, and found that high scores on integrative complexity related to greater frequency of doubting (Hunsberger et al., 1996).

Additional support for doubt's relationship with complex thinking was absent, however, in a predominantly Christian sample of college undergraduates, alumni, and church-goers in the Midwest (Gauthier et al., 2006). Doubt was assessed with a 10-item scale from previous publications (Altemeyer, 1988; Hunsberger et al., 1996) and was uncorrelated with a measure of preference for abstract and complex thinking (Gauthier et al., 2006).

In the same sample, doubt was negatively correlated with religious belief salience (i.e., "My religious beliefs provide meaning and purpose to life" and "Being a religious person is important to me;" Gauthier et al., 2006). Similarly, doubt was related to less personal religiousness, church attendance, agreement with beliefs taught, and religious

fundamentalism, in a longitudinal study of Canadian high school seniors through their second year of college (Hunsberger et al., 2002). In this study, doubt was also assessed with a 10-item scale (e.g., to what extent do you have "doubts that religious writings, such as scriptures were true because the writings seemed contradictory, irrational, or wrong;" Hunsberger et al., 2002).

Doubt was associated with less life satisfaction, especially for males, but unrelated with self-esteem and loneliness in the Christian undergraduate sample (Gauthier et al., 2006). In the longitudinal study, doubt was cross-sectionally related to less optimism and social support and slightly more depressive symptoms; however, these relationships did not persist after two years, although levels of doubt remained stable (Hunsberger et al., 2002). Given that the quantity of doubting remained stable but was no longer associated with negative outcomes after two years, it may be that the students successfully integrated their new religious perspective into their worldview and social network over time.

Other studies of doubt have considered its relation to family and friend networks. A study of parochial high school students assessed doubt with two sets of questions regarding the same content as Altemeyer and Hunsberger's items (e.g., existence of God, life after death, orthodox Christian beliefs such as the divinity of Jesus Christ) but with different prompts: "how certain are you that . . ." and "how often have you wondered if . . ." (Kooistra & Pargament, 1999). The sample consisted of students from a Catholic school and a reformed Protestant school, and the authors noted that religion appeared to be more tightly interwoven in the family and school culture for the latter group. For the entire sample, but especially for the Protestants, wondering and uncertainty related to

family conflict. For the entire sample, wondering related to anxiety and negative affect as well (Kooistra & Pargament, 1999).

The different sources and impacts of doubt have also been considered in the context of the individual's role in a religious community. In a study using a national sample of Christian church members, religious doubt was referred to as "the potential dark side of religion" and operationalized with four questions regarding the frequency of doubts "that solutions to your problems can be found in the Bible," "about your religious or spiritual beliefs," "whether prayer makes a difference," and "about the things you have learned here (i.e., in the church)" (Krause & Wulff, 2004, p. 43). Results indicated that doubt was related to more depressive affect and somatic symptoms and less satisfaction with health, particularly for individuals occupying formal roles in the church. In this case, doubt may have had an added impact on the religious leaders, because doubt is defined in these items as a lack of orthodox Christian belief.

Recent findings implicate negative social interactions in the religious community as a cause of doubt (Krause & Ellison, 2009). The study of older White and Black adults, who were currently or formerly practicing Christians, or who had never been religiously affiliated, distinguished doubt itself from secondary coping responses, categorized into seeking spiritual growth or suppressing doubt (Krause & Ellison, 2009). The items include beliefs about doubt, which causes the measurement to overlap considerably with religious quest orientation (see below). Despite the measurement concerns, the study points to a *process* of religious doubt. More negative interaction in the church predicted more doubt over time as well as more suppression of doubt;

furthermore, this suppression was related to worse self-rated health (Krause & Ellison, 2009).

Studies have also provided support for moderators of the impact of doubt. Krause and colleagues have conducted a series of longitudinal studies about doubt in aging involving national samples and national samples that are explicitly religious. In a nationwide longitudinal study of older White and Black adults, doubt's relationship to lower life satisfaction, optimism, and self-esteem over time was buffered by higher educational attainment (Krause, 2006). In other studies they determined that doubt is related to less positive affect, more depression, and less satisfaction with health in older adults, and is more harmful for more religious and younger individuals (Krause, Ingersoll-Dayton, Ellison, & Wulff, 1999; Krause & Wulff, 2004).

Similarly, in another large random sample of adults (Galek, Krause, Ellison, Kudler, & Flannelly, 2008), an interaction was found between age and doubt, such that doubt has a lesser impact on mental health as people age. In that study, doubt was operationalized by only two items: "How often have you had doubts about your religious faith because of (1) evil in the world, or (2) personal suffering?" The sample was evenly distributed among men and women but was 90 percent White. Frequency of doubts was unrelated to frequency of prayer and church attendance but positively related to multiple indicators of worse mental health, including depression, anxiety, and hostility (Galek et al., 2008).

Pargament and colleagues also measured religious doubts in a mixed sample comprised of Roman Catholic church members who reported a variety of stressors, bereaved college students, and moderately to highly religious college students who had

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experienced a personal injustice (Pargament, Zinnbauer et al., 1998). Doubts were related to negative outcomes across the board, including greater negative affect and less competence in problem solving for all groups, lower self-esteem and greater trait anxiety for the church group, lower scores on perceived handling and positive outcomes of the event for the church and bereaved samples, and lower scores on perceived religious growth from the event for the bereaved sample (Pargament, Zinnbauer et al., 1998).

In sum, although doubt is theorized to be a necessary step toward spiritual maturity (e.g., Krause & Wulff, 2004), the preponderance of data links it with negative outcomes. Contradictory evidence exists for doubt's relation to complex thinking (e.g., Hunsberger et al., 1996; c.f., Gauthier et al., 2006) and its impact over time (e.g., Hunsberger et al., 2002; c.f., Krause et al., 1999; Krause, 2006).

Quest. Scales measuring quest orientation to religion have been published by multiple researchers (Altemeyer & Hunsberger, 1992; Batson, 1976; Batson & Ventis, 1982; Batson & Schoenrade, 1991b) and used with variations by others (Kojetin, McIntosh, Bridges, & Spilka, 1987a, 1987b; McFarland, 1989). Batson and colleagues introduced the quest scale to expand the cadre of motivations or orientations for religious belief and behavior (Batson & Schoenrade, 1991a), positing that the scale was designed to reflect "an approach that involves honestly facing existential question in all their complexity, while at the same time resisting clear-cut, pat answers" (Batson, Schoenrade, & Ventis, 1993, p.166). Others have described the construct as involving "a willingness to struggle with *existential questions*" (Beck & Jessup, 2004, p. 284).

Batson and colleagues' 12-item scale (Batson & Schoenrade, 1991b) reflects three subscales of questing: asking existential questions (e.g., "God wasn't very

important for me until I began to ask questions about the meaning of my own life"),

seeing doubts as positive (e.g., "Questions are far more central to my religious experience

than are answers"), and openness to change (e.g., "As I grow and change, I expect my

religion also to grow and change"). Altemeyer's version includes items similar to

Batson's, regarding valuing doubt and being open to change (Altemeyer & Hunsberger,

1992); however, its items also address beliefs about whether questioning is compatible

with religious faith , which appear to confound a quest orientation with anti-

fundamentalism or unorthodoxy. Similarly, some items from Batson's conceptualization

have been evaluated as "antireligious" (Watson, Morris, Hood, Milliron, & Stutz, 1998)

and may confound quest with unorthodox beliefs and identity confusion.

The quest orientation may be confounded with several other constructs. Some

have suggested quest is agnosticism (Donahue, 1985); however, quest has had low

correlations, as opposed to negative correlations, with orthodoxy (Batson & Schoenrade,

1991a), yet agnostics had relatively high scores on quest in another sample (Burris,

Jackson, Tarpley, & Smith, 1996). Researchers have raised the question about whether

questioning and doubt are the same (Donahue, 1985). Quest scales may confound a quest

orientation with the construct of doubt (e.g., "For me, doubting is an important part of

what it means to be religious") as well as religious change as an outcome of life events

(e.g., "My life experiences have led me to rethink my religious convictions"). Some

researchers have contended that study of quest has been biased by ideology of the

researchers (Watson, Morris et al., 1998).

Despite validity problems, quest has been studied frequently on religious

undergraduate samples and found to be associated with tolerance, helping behaviors, and

less prejudice (Altemeyer & Hunsberger, 1992; Batson & Schoenrade, 1991a; Batson et al., 1993; Kirkpatrick, 1993; McFarland, 1989; Tsang & McCullough, 2003). For example, in a vignette study with undergraduate women, quest was "associated with antipathy toward … intolerance" but not toward intolerant individuals (Batson et al., 2001, p. 39). Additionally, among parents of university students, quest correlated negatively with measures of right-wing authoritarianism and prejudice, and also with service attendance and reading sacred texts (Altemeyer & Hunsberger, 1992). In an Australian study that included undergraduates and community members, quest was cross-sectionally positively related to greater extraversion, openness, and post-traumatic growth in response to a significant negative life event (Wilson & Boden, 2008). On the other hand, quest has been associated with negative states, such as identity confusion (Klaassen & McDonald, 2002; Watson, Morris et al., 1998) and trait anxiety (Kojetin et al., 1987a, 1987b) and an inverse association with constructive thinking (Watson, Morris, Hood, Miller, & Waddell, 1999). Still others have found no correlation with mental health or distress (Salsman & Carlson, 2005).

In a study with moderately religious, mostly Christian college students, quest scores were higher after experimentally induced existential conflict (Burris et al., 1996). Among undergraduates at secular and Christian institutions, quest was associated with greater family conflict, and quest scores were highest for students who endorsed "personal religion" or "agnostic" as their religious affiliation (Burris et al., 1996). Finally, among students at a secular institution, quest was associated with higher scores on measures that assessed resistance to identification with the status quo and the desire to engage in abstract and complex thinking (Burris et al., 1996).

In a somewhat more religiously diverse college student sample, quest was unrelated to spiritual well-being and measures of religiousness but was related to lower fundamentalism scores for the entire sample (Genia, 1996). Specifically among self-reported religious participants, quest was related to less spiritual and religious well-being, greater depression and lower self-esteem. The authors note that quest was related to lower social desirability scores, suggesting quest is associated with an accurate report of one's mental pain (Genia, 1996).

Acknowledging the various dimensions of struggle, quest has also been operationalized as multiple subscales (Beck & Jessup, 2004): tentativeness (i.e., valuing questions and doubts), change (i.e., openness to change and scrutiny of beliefs), ecumenism and universality (i.e., acceptance of other faiths), exploration (i.e., examination and exploration), moralistic interpretation (i.e., valuing the Bible's meaning over its historical accuracy), religious angst (i.e., experiencing isolation, anxiety, or doubt), complexity of thinking, and existential motives (i.e., being driven by finding meaning and purpose). The researchers analyzed how these subscales related to other religious constructs cross-sectionally among Christian college students; notably, five subscales related to lower spiritual well-being: change, universality, angst, complexity, and existential motives (Beck & Jessup, 2004).

All of these scales, except for moralistic interpretation, correlated positively with Batson's 12-item quest scale (Beck & Jessup, 2004). Although low correlations between scales and a factor analysis indicated that the subscales were unique, the authors speculate that two types of quest are represented in these subscales: a "soft" quest that is compatible with adherence to a particular religious faith and a "hard" quest that better

resembles Batson's theorized construct but may "describe a person who is unsure, conflicted, or even confused about their (sic) own metaphysical stance" (Beck & Jessup, 2004, p. 290).

In a closer look at the negative relationship between quest and spiritual well-being, again in a sample of Christian college students, quest related to lower spiritual well-being through a lower sense of personal meaning and identity (Klaassen & McDonald, 2002). Because quest, meaning, and identity loaded on separate factors in a principal components factor analysis, the authors proposed that quest is distinct from meaning and identity development (Klaassen & McDonald, 2002). A trend toward a curvilinear relationship between quest and personal meaning suggests that high and low levels of quest are related to greater meaning (Klaassen & McDonald, 2002).

Questing has also been operationalized differently in the Spirituality in Higher Education project, as seeking opportunities for spiritual growth, "seeking beauty in life, finding answers to the mysteries of life, searching for meaning and purpose in life, etc." (Higher Education Research Institute, 2004). This variable appears to capture normative spiritual seeking among college students (Pascarella & Terenzini, 1991); however, some items referring to seeking and searching may be confounded with being in a process of coping to find meaning (Park, 2005), suggesting meaning has not yet been found. In fact, quest was related to more distress, controlling for prior depressive symptoms; to lower self-esteem, controlling for prior self-confidence; and to poorer physical health, controlling for exercise (Bryant & Astin, 2008).

Concerns. In the Spirituality in Higher Education project, which involves nearly 3,500 college students nationwide, struggle was described generally as "intrapsychic

concerns about matters of faith, purpose, and meaning in life," (Bryant & Astin, 2008, p. 2). Struggle was operationalized with seven items: "Questioned my religious/spiritual beliefs," "Felt unsettled about spiritual/religious matters," "Struggled to understand evil, suffering, and death," "Felt angry at God," "Felt disillusioned with my religious upbringing," "Felt distant from God" and "Disagreed with family about religious matters." This measure had an internal consistency alpha of .65 and correlated at .35 with Batson et al.'s quest scale (Bryant & Astin, 2008).

Cross-sectionally, concerns related negatively to religious participation (Bryant & Astin, 2008). They related positively to quest orientation and to growth in religious tolerance but negatively to religious and spiritual growth. They related to seeing God as a "divine mystery," a "teacher," or a "universal spirit," and related negatively to more personal views of God as "beloved", a "protector", or "part of me" (Bryant & Astin, 2008).

The Discrepancy in the Literature: Is Struggle Positive or Negative?

Spiritual struggle's relations with positive outcomes. Struggling with one's faith, in the form of a quest orientation, has been associated with the positive outcomes of less prejudice and more tolerance (Altemeyer & Hunsberger, 1992; Batson & Schoenrade, 1991a; Batson et al., 1993; Kirkpatrick, 1993; McFarland, 1989; Tsang & McCullough, 2003), but, notably, also with less spiritual well-being for religious individuals (Beck & Jessup, 2004; Genia, 1996; Klaassen & McDonald, 2002).

Other positive outcomes of struggle include religious or spiritual growth, found among college students (Pargament et al., 2000) and clergy (Meisenhelder & Marcum, 2004; Proffitt et al., 2007; Rosmarin et al., 2009); however, support for this is uneven and

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depends in part on the measure of struggle. For instance, within the same sample of medically ill elderly, reappraisal to evil forces related positively, and reappraisal of God's powers related negatively, to religious growth and closeness to God (Pargament et al., 2004).

  Growth. Most evidence indicates that struggle is related to greater post-traumatic growth among college students (Pargament, Smith et al., 1998; Pargament et al., 2000), breast cancer survivors (Gall et al., 2009); medically ill elderly (Pargament , Smith et al., 1998; Pargament et al., 2004), victims of trauma (Pargament , Smith et al., 1998) and clergy (Proffitt et al., 2007). However, some contradictory findings exist: struggle was unrelated to growth among cancer patients (Cole et al., 2008), Christian trauma survivors (Harris et al., 2008), and bereaved college students (Park & Cohen, 1993). One aspect of struggle, seeing God as less powerful, was related to less growth in medically ill elderly (Pargament et al., 2004). Additionally, anger at God was related to less growth in a bereaved college student sample (Pargament, Zinnbauer et al., 1998).

  Some aspects of struggle may indicate an openness and ability to face existential questions, characteristics that are associated with positive outcomes like post-traumatic growth (Shaw, Joseph, & Linley, 2005). At the same time, current measurements of growth may reflect attempts to make meaning as opposed to veridical positive change (Frazier, Tennen et al., 2009); therefore, reports of retrospective growth must be viewed with caution.

  Spiritual struggle's relations with positive religious coping. Struggle as a coping response can correlate positively with positive forms of religious coping according to the stress mobilization hypothesis (Pargament, 1997), as was found in some

studies (Bjorck & Thurman, 2007; Fitchett et al., 2004; Pargament, Smith et al., 1998). Similarly, the experience of struggle may co-occur with its counterpart, comfort (Exline et al., 2000), and be unrelated (Harris et al., 2008). Alternatively, positive religious coping can moderate the impact of struggle on outcomes, and one study reported this nuanced finding (Bjorck & Thurman, 2007).

In other studies using the RCOPE, struggle and positive religious coping were inversely related among geriatric depression patients (Bosworth et al., 2003), but usually were unrelated, as in a national sample (McConnell et al., 2006), and among Christian and Jewish clergy (Proffitt et al., 2007), parents of children with autism (Tarakeshwar & Pargament, 2001), and trauma victims (Bradley et al., 2005).

Some research indicates that the relationship between struggle and positive religious coping depends on the particular measure of negative religious coping (Fitchett et al., 2004). The identical measure (i.e., the brief RCOPE) can show opposite relations with positive religious coping in different samples (Fitchett et al., 1999; Fitchett et al., 2004). The stress mobilization hypothesis may have applied to the samples in the latter study, which were facing more severe and chronic stressors (Fitchett et al., 2004).

Spiritual struggle's relations with other measures of religiousness. Struggle related inconsistently to other measures of religiousness, though it was typically associated with less religiousness (Bosworth et al., 2003; Burris et al., 1996; Cole et al., 2008; Fitchett et al., 1999; Fitchett et al., 2004; Gauthier et al., 2006; Hunsberger et al., 1996; Hunsberger et al., 2002). Notably, in national samples, struggle was unrelated to other measures of religiousness (Galek et al., 2008; Idler et al., 2003; McConnell et al., 2006). Interestingly, struggle can be related in different ways to the same religious

activity, depending on the finer nature of that activity (e.g., unrelated or inversely related to calming or focusing prayer, and positively related to deferring or avoiding prayer; Harris et al., 2008).

Despite these findings, a religious person may be at a higher risk for struggle, because religious interpretations for negative events (e.g., Kunst et al., 2000) and negative feelings of guilt and shame (e.g., Luyten, Corveleyn, & Fontaine, 1998) are more salient for religious individuals. In contrast, cross-sectional data indicates that more frequent participation in the religious community is associated with fewer struggles (Fitchett et al., 2004). It may be that individuals experiencing struggle avoid religious communities because they do not feel welcome in their religious community or because the nature of their struggle is disillusionment with the institution or community itself. Clearly, longitudinal studies are needed before any conclusive statements can be made regarding the temporal relationships between struggle and other measurements of religiousness.

Spiritual struggle's relation with age. The college years are considered a normative time to explore one's faith (Pascarella & Terenzini, 1991), but even though changes in worldview are expected, spiritual struggle is associated with distress (Beck & Jessup, 2004; Bryant & Astin, 2008; Genia, 1996; Klaassen & McDonald, 2002).

Age is a factor in the development and impact of struggle in older adults as well. Among geriatric depression patients (Bosworth et al., 2003); middle-aged cancer patients (Cole et al., 2008); and diabetic, heart failure, and oncology patients (Fitchett et al., 2004); and in the GSS (Idler et al., 2003), younger people struggled more.

Furthermore, interaction effects have been found, such that struggle has a greater relationship with negative outcomes in younger individuals (Galek et al., 2008; Krause et al., 1999). These findings may exist because of higher expectations for physical and mental health among younger people. Nonetheless, doubt has a strong effect on older adults as well, which the authors explained by suggesting that "older people who have invested more energy and effort in their faith are likely to be more troubled when doubts about religion arise" (Krause & Ellison, 2009, p. 309).

Spiritual struggle's relation with outcomes over time. Studies that investigated long-term effects of struggle, but have not assessed struggle itself over time, have produced mixed findings. Some indicate that baseline struggle predicts long term poor outcomes (Fitchett et al., 1999; Pargament et al., 2001; Phillips & Stein, 2007) and others indicate that the long-term effect of struggle is positive (e.g., marginally lower depression, Bosworth et al., 2003; post-traumatic growth, Gall et al., 2009). Other studies indicate the effect of struggle does not last (Bosworth et al., 2003; Smith et al., 2000). Finally, moderator variables, such as education, may buffer the long-term effect of struggle on outcomes (Krause, 2006).

A Possible Explanation

The discrepancy between spiritual struggle's association with negative outcomes and its theorized and empirical links to spiritual and personal growth leads to the question: what distinguishes healthy or productive spiritual struggle--that which relates to personal and spiritual growth--from maladaptive struggling?

Resolution. It is hypothesized that for spiritual struggle to be beneficial, it must resolve in a positive way (see Pargament, 2007 for a description of spiritual

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transformation that leads to integration and growth). As previously mentioned, in older adults chronic spiritual struggling was found to predict declines in health, while transient struggling did not (Pargament et al., 2004). Others have speculated that struggle fails to result in benefit, "if one is locked in maladaptive ways of conceiving of and responding to the existential questions life poses" (Bryant & Astin, 2008, p. 23).

Very few studies have been conducted that suggest that spiritual struggle diminishes over time (Exline & Martin, 2005; Pargament et al., 2004); however, suggestions have been posited as to how resolution occurs. A cognitive shift may be required (e.g., a reappraisal of an image of God or of the purpose of suffering; Exline & Martin, 2005). Successful resolution of struggle presumably requires a "capacity to deal with abstractions, inconsistencies, paradox, and the complexities embodied in spiritual struggles" (Pargament et al., 2005, p. 264).

Writing about struggle to facilitate resolution. Resolution of negative feelings toward a higher power, according to the Judeo-Christian faith tradition (e.g., Hick, 1966; Laytner, 1990), may be facilitated by engagement with that power, in a virtual conversation. The expressive writing paradigm (Pennebaker, 1997) facilitates emotional engagement in processing a traumatic or stressful event (Sloan & Marx, 2004) and making meaning from open or unresolved events (Boals, Banks, Hathaway, & Shuettler, 2011). Adapting the writing paradigm to communication with God indicates that such letters or prayers are comparable in linguistic characteristics to typical self-disclosure narratives in the expressive writing paradigm (VandeCreek, Janus, Pennebaker, & Binau, 2002), and may be accompanied by psychological benefits (e.g., Sloan & Marx, 2004). Finally, in addition to initial emotional engagement facilitating resolution to a stressful

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event, experiments have shown that a self-distanced perspective further facilitates working through an event, through reconstruing and reducing negative emotions (e.g., Kross & Ayduk, 2008; Kross, Ayduk, & Mischel, 2005).

Outcomes of resolution. If changes in spiritual struggle over time are observable, what accompanies and follows such changes? Because spiritual struggle in response to trauma is associated with post-traumatic distress (e.g., Aflakseir & Coleman, 2009; Conners, Whiteside-Mansell, & Sherman, 2006; Harris et al., 2008; Wortmann, Park, & Edmondson, 2011), reductions in spiritual struggle would necessarily relate to reduced distress. Beyond reduction in distress, resolved spiritual struggle (a process of struggling that has concluded in a positive way) may have additional benefits (e.g., Bosworth et al., 2003; Gall et al., 2009).

Efforts to resolve struggle may exercise a "spiritual muscle," developing psychosocial resources that enhance the ability to cope with future stressors and permit a resilient response to future trauma (in terms of experiencing less post-traumatic distress; Bonanno et al., 2007). The notion of a psychological "muscle" is elaborated by Baumeister and colleagues (Baumeister, Vohs, & Tice, 2007) in describing self-control; it is a muscle whose strength can be exhausted but also enhanced by exercising it (e.g., through control of thoughts and regulating emotions).

One aspect of spiritual struggle involves anger at God. Whereas the personal virtue of morality involves self-control and is postulated to involve *preventing* oneself from feeling angry or acting out in anger (Baumeister & Exline, 1999), in the case of spiritual struggle, the spiritual muscle may be exercised when one *permits* oneself to feel angry and continue to fully engage in an honest, authentic dialog with God. Consistent

with this notion, the suppression of doubt was related to poorer health (Krause & Ellison, 2009). The effort is exerted and spiritual muscle strengthened when one confronts one's true feelings, wrestles with the distress that accompanies them, and relentlessly pursues a path of coming to terms with them. For instance, in one unpublished study of resolution of prior stressful events, resolution was associated with less avoidant coping (Fenster, 2009).

The process of engaging in and resolving spiritual struggle may develop personal strengths, such as greater meaning in life (Park, Edmondson, Fenster, & Blank, 2008; Pargament et al., 2006) or mastery regarding one's ability to endure psycho-spiritual challenges (Thompson, 1981). Additionally, greater cognitive flexibility may facilitate or be an outcome of efforts to resolve spiritual struggles.

Cognitive flexibility or tolerance for uncertainty may be exemplified in increased tolerance for others' differing faiths (Bryant & Astin, 2008) or in tolerance for the vicissitudes of one's own faith (McIntosh & Spilka, 1990; Pargament et al., 2006). Ambiguity tolerance as a cognitive style variable has been described as flexibility and "comfort dealing with the shades of gray in life" (Beitel, Ferrer, & Cecero, 2004, p. 569) and has been inversely related to dogmatism and rigidity among undergraduates (MacDonald, 1970). Uncertainty is inherently stressful and failure to resolve uncertainty is related to prolonged anxiety (Shackman et al., 2009). The degree to which a person can tolerate the inherently ambiguous process of making meaning may determine the extent to which struggles relate to distress, and likewise, the process of resolving struggles may enhance one's ability to tolerate ambiguity. At the same time, religious

belief may be more characterized by a need for cognitive closure (Amodio, Jost, Master, & Yee, 2007).

In contrast, to cognitively and emotionally avoid the notion of doubt is akin to spiritual foreclosure. A kind of spiritual resilience may be developed if struggling in fact forges a stronger, resolved spirituality, characterized by commitment and flexibility (Pargament, 2007) and an "embracing, complex kind of knowing" (Parks, 2000, p. 30).

The Present Study

Although it has been proposed previously (e.g., Bryant & Astin, 2008; Kunst, Bjorck, & Tan, 2000) that investigation into the pattern of effects over time and the qualitative aspects of efforts to resolve struggle is merited, no studies published to date have focused on *resolution* of spiritual struggle. The present study aims to observe the pattern of spiritual struggle over time and analyze its relations to potential correlates and outcomes.

Studies have shown that college students experience measureable levels of spiritual struggle (particularly psychology students; Bryant & Astin, 2008; J.J. Exline, personal communication, October 19, 2010) and are exposed to potentially traumatic events to an extent sufficient to permit study of post-traumatic resilience (Frazier, Anders et al., 2009); moreover, post-traumatic symptomatology can be measured in response to less severe stressors than traumas (Wortmann, Park, & Edmondson, 2011). Therefore, an undergraduate sample was deemed sufficient and appropriate to measure the intended constructs of spiritual struggle and associated distress.

Hypotheses. Based on previous research, spiritual struggle is predicted to relate to distress. However, resolving spiritual struggle will relate to positive outcomes, in terms of personal resources and resilient outcome to future stressors.

1) Spiritual struggle will be related to negative outcomes cross-sectionally. There will be positive correlations between measures of struggle, distress, and meaning violation, and a negative correlation with presence of meaning. The relationship between Quest and presence of meaning and meaning violation will be explored, based on its relation to lower sense of meaning in college students (Klassen & McDonald, 2002). Quest is predicted to positively relate to comfort with ambiguity, based on its relation to cognitive complexity (Burris et al., 1996).

2) The struggle induction/resolution condition will impact struggle scores during writing days. The struggle/resolution writing prompts were designed to create awareness of spiritual struggle and require elaboration of struggles; therefore, higher negative affect and negative attitudes toward God post-writing are predicted in response to struggle intervention prompts relative to the control prompts each day. The second day's struggle intervention prompt was designed to begin the process of resolution; therefore, struggle scores on day 2 are predicted to be lower compared to day 1. The third day's struggle intervention prompt was designed to induce a self-distanced perspective; therefore, struggle scores are predicted to be lower on day 3 than on days 1 and 2.

3) Spiritual struggle will resolve. There will be a drop in struggle from baseline and an increase in event closure. Quest is predicted to remain relatively constant, compared with other forms of struggle. The struggle writing condition will result in greater reduction in spiritual struggle over time compared to the control condition.

4) Resolved spiritual struggle will relate to a resilient response to a subsequent event, in terms of less distress and more positive coping with the interim event, less meaning discrepancy, and low struggle. Resolved spiritual struggle will also relate to higher levels of personal resources at final follow-up, including higher mastery, more stress-related growth, greater presence of meaning, and greater comfort with ambiguity.

Method

The present study observes change and resolution of multiple measures of spiritual struggle over time, both as it occurs naturally and in response to one or more days of a spiritual struggle-related writing intervention. Day one of the intervention writing was designed to potentiate spiritual struggle with a prompt to consider how sense is made of a distressing, unresolved personal experience and a higher power's role in that event. Day two of the intervention prompted participants to converse with that higher power about the event. Day three of the intervention prompted participants to assume a self-distanced perspective in writing, to encourage resolution. Control group prompts involved writing about time management and were designed to be neutral. Changes in spiritual struggle over time, and all other study variables, were measured quantitatively. Measured variables included general and event-related distress, life event history, meaning, mastery, tolerance for ambiguity, growth, and coping.

Participants

Participants were 193 undergraduate students recruited from the Participant Pool at the University of Connecticut. The sample was 77.7% women. The majority (62.7%) identified as White or Caucasian, followed by 16.1% identifying as Asian, 8.3% as Multiracial, 4.7% as Black or African American, and 7.3% as other. The twelve

participants who indicated "other," identified as Hispanic or Latino (*N*=7; 11.9%),

Pakistani (*N*=2), other Asian (*N*=2), and Egyptian (*N*=1). One participant indicated he

preferred not to provide race, and another left the question blank. The majority (57.5%)

were first year undergraduates with a mean age of 18.94 years (*SD*=1.17), ranging from

18 to 25 years; 16 participants did not indicate date of birth or provided an unlikely date

that was considered to be errant (e.g., their age would be less than 12 years).

Procedure

Prescreening to identify potential participants. To maximize the observed

effects for a low base-rate phenomenon such as spiritual struggle, students who were able

to identify a distressing, unresolved personal event were targeted for inclusion. In

participant pool prescreening, the presence of a negative, unresolved event (based on

Boals et al., 2011) was assessed, a current distress rating (on a scale from 1 to 100, based

on distress ratings commonly used in treatment (e.g., Foa, Hembree, & Rothbaum, 2007).

To identify candidates, questions were added to the standard participant pool pre-

screening survey administered to Introductory Psychology students during the first week

of classes each semester. Questions were designed to identify students who had an

unresolved event (using the Closure scale, Beike & Wirth-Beaumont, 2005; see

Measures) that caused at least some distress (using a single-item scale; see Measures).

The following procedures were conducted each semester (wave) in which the study was

run (Spring 2011, Fall 2011, and Spring 2012).

For the Spring 2011 semester (Wave 1), the time between baseline and final

follow-up for students participating through a remote campus was shorter than that for

Storrs by several days, because of delays in completion of participant pool prescreening

due to weather, and because the pool closed earlier. This compressed follow-up period affected three participants; analyses were run to evaluate whether this difference impacted results. Although detailed data on the sample of candidates was not recorded for the Spring 2011 semester, the procedures were identical to those described below for the other two waves, and numbers were comparable to Spring 2012.

For the Fall 2011 semester (Wave 2), all students who consented to have their prescreening data used for research were included in the initial data set (N=1789). Students who skipped the prompt to think of a negative, open personal event (N=39) or who did not respond to questions about closure or distress related to the event (N=63) were omitted from the analysis (resulting N=1687). Students under the age of 18 (N=82), or who did not provide their age (N=1) were omitted from the analysis (resulting N=1604).

The fourth item in the Closure scale was reverse-scored, so that lower scores on all closure items referred to less closure, or a more open, unsolved event. A mean closure score less than or equal to 8 was used to indicate the event was somewhat *open* (i.e., unsolved). Current distress greater than 1 was used to eliminate individuals who reported no distress associated with the event. Filtering the prescreening dataset according to these criteria, removing duplicates (N=4), and removing students who were no longer found in the participant pool system (likely because they had dropped the psychology class) resulted in 1277 students as candidates to participate in the study in Wave 2.

For the Spring 2012 semester (Wave 3), all students who consented to have their prescreening data used for research were included in the initial data set (N=777). No

students skipped the prompt to think of a negative, open personal event, but those who did not respond to questions about closure or distress (N=55) were omitted from the analysis (resulting N=722). Students under the age of 18 (N=2), or who did not provide their age (N=1) were omitted from the analysis (resulting N=719).

As described above, the fourth item in the Closure scale was reverse-scored, so that lower scores on all closure items refer to less closure, or a more open, unsolved event. A mean closure score less than or equal to 8 was used to indicate the event was somewhat open. Current distress greater than 1 was used to eliminate individuals who reported no distress associated with the event. Filtering the prescreening dataset according to these criteria, removing students who were no longer found in the participant pool system (likely because they had dropped the psychology class; N=3) resulted in 589 students as candidates to participate in the study in Wave 3.

The study entitled "Resolving Spiritual Struggles" was displayed to all candidates who met criteria as described above. The study was available for sign-up for a limited amount of time (i.e., less than one week) in order to permit the 10-week follow-up to occur by the end of the semester.

An ANOVA was conducted to compare the three waves on demographics and study variables (Measures described below). Results indicated that Wave 3 was higher than Wave 2 in discomfort with ambiguity, $F(2, 190) = 3.21$, $p = .042$; otherwise, there were no differences among waves, and the data were combined into a single data set.

Study administration. This was a multi-part study conducted over the course of one semester, for three semesters (i.e., three waves of data), which permitted collection of baseline data and two follow-up time points. The study took place entirely online using

the PsychSurveys platform. Participant email addresses were obtained from the

psychology participant pool, as standard practice, and used to send invitational emails.

Support staff for PsychSurveys linked the five surveys, so that email addresses imported

once into the baseline survey were automatically imported into subsequent surveys, thus

reducing participant burden and ensuring accuracy in matching data across time points.

Previous research indicates that writing about spiritual struggles elicits moderate

but not extreme distress from college students (J.J. Exline, personal communication,

October 15, 2010). Therefore, appropriate contact information for sources of help in

cases of extreme distress was made available to all participants at the end of each online

survey. A full proposal was submitted to the IRB of the University of Connecticut to

ensure the study was conducted according to all requirements for research with human

subjects. Over the five time points (baseline and two additional writing days, first

follow-up and final follow-up), participants responded to emailed invitations to complete

the respective surveys. All participants indicated consent to participate in each of the five

surveys.

Study timeline. In the first three of five surveys, participants were asked to write

online for ten minutes on each of three consecutive days in response to a prompt. The

duration and frequency of sessions using the experiential writing paradigm have varied in

the literature (e.g., Sloan & Marx, 2004; Boals et al., 2011), with as little as two minutes

over two days showing physical health benefits (Burton & King, 2008), and a single

session showing differences between intervention and control groups (Boals et al., 2011).

The present study used three writing sessions for ten minutes each over three days.

At baseline, participants provided responses to multiple measures, including spiritual struggle and demographic information. They were then were asked to describe a distressing, unresolved event and indicate the month and year of its occurrence (Beike & Wirth-Beaumont, 2005), as well as their levels of stressor-related distress on a single item scale (on a scale from 1 to 100, based on distress ratings commonly used in treatment, e.g., Foa, Hembree, & Rothbaum, 2007) and on the PTSD Symptom Checklist (PCL; Blanchard, Jones-Alexander, Buckley, & Forneris, 1996).

After completing baseline questionnaires, participants were presented writing prompts online (adapted from Boals et al., 2011; J.J. Exline, personal communication, October 14, 2010; Kross & Ayduk, 2008; Kross, Ayduk, & Mischel, 2005; Sloan & Marx, 2004; see Appendix) and were instructed to write for ten minutes. One day 1, each participant randomly received one of two writing prompts: a control (time management) or a spiritual struggle induction. After writing, participants completed measures of spiritual struggle and current affect. These items assessing emotional reaction (the ATGS and the Positive and Negative Affect Scales; PANAS; Watson, Clark, & Tellegen, 1988) were assessed immediately post-writing, which also served as a manipulation check; the struggle/resolution group was predicted to report greater negative affect and negative attitudes toward God than the control group.

On the following two days (Times 2 and 3), participants responded to emailed invitations to write online and complete selected measures. To facilitate the process of resolution in spiritual struggle between baseline and Time 2, participants receiving the struggle condition were prompted to recall the event and write about how their understanding of the event may have changed and to direct writing toward the higher

power (day 2) and to assume a self-distanced perspective on the event (day 3). All participants reported event-related distress and resolution (Closure Scale; Beike & Wirth-Beaumont, 2005), as well as post-traumatic distress, spiritual struggle, growth, and meaning violation.

Due to an error in administering the study online, during Wave 2, participants were not maintained in the same writing condition over all three days. Over the three days, 25% of participants received three struggle intervention days, 25% received two, 25% one, and 25% received the control prompt all three days. In Waves 1 and 3, participants were maintained in the same writing condition over the three days, as intended.

The first follow-up took place four weeks after baseline. Participants were emailed to complete follow-up measures related to their target event. Through first follow-up, growth, meaning violation, and coping questions were anchored to the open, negative personal event the participant indicated s/he experienced prior to baseline. The final follow-up took place ten weeks after baseline. Participants were again emailed to complete follow- up surveys to assess their response to a subsequent stressor.

Measures

Questions and writing prompts were prefaced with an inclusive statement regarding Deity concepts.

Demographics. At baseline, participants provided demographic information (i.e., date of birth, sex, race, and year in the undergraduate program). Age was calculated as the range between reported date of birth and the date on which the student completed the baseline survey.

Religious practices. Subscales from the Brief Multidimensional Measurement of Religiousness/Spirituality for Use in Health Research (BMMRS; Abeles et al., 1999) were used to assess multiple aspects of religiousness. Adequate internal consistency reliabilities were demonstrated by the U.S. 1998 General Social Survey (GSS; Idler et al., 2003).

Public religious activities. Frequency of engagement in public religious activities (e.g., *go to religious services*) was assessed with two items on a scale from 0 (never) to 5 (more than once a week; GSS Cronbach's α = .82; the present sample Cronbach's α = .77, .84, .84, at baseline and follow-ups, respectively.

Religious and spiritual identity. Degree of identification with being religious and spiritual was assessed with two items on a scale from 0 (not at all) to 3 (very; GSS Cronbach's α = .77; the present sample Cronbach's α = .69, .72, .70, at baseline and follow-ups, respectively).

Religious preference. Current religious preference was indicated by selecting one from a list of 30 choices, including traditional affiliations as well as agnostic, atheist, none, and other options. The list of religious preferences was based on that available in the BMMRS (Abeles et al., 1999) and slightly modified based on pilot data with undergraduates from November, 2010.

Private religious practices. Engagement in private religious practices (e.g., *meditate; pray privately in places other than a place of worship*) was assessed with three of five items from the Private Religious Practices subscale of the BMMRS rated on a scale from 0 (never) to 7 (several times a day; GSS Cronbach's α = .72; the present sample Cronbach's α = .68, .70, .63, at baseline and follow-ups, respectively).

Religious social support. Religious social interaction and emotional support were assessed with three items, one developed by the researcher's lab (*are you involved in a religious club or youth group?*), and two adapted from the Religious Support-Short Form: Emotional Support Received from others subscale of the BMMRS (Abeles et al., 1999) rated on a scale from 0 (not applicable) to 4 (very often) . Religious support was assessed with the item *how often do the people in your religious/spiritual community listen to you talk about your private problems and concerns?* Non-religious sources of support were assessed with the item *how often do the people in your life, outside a religious/spiritual community, listen to you talk about your private problems and concerns?* Cronbach's alpha for the two support items in the present sample indicated that the two items should not be considered together as a measure of social support (α = .35, .42, 52, at baseline and follow-ups, respectively).

Positive attitudes toward God. Positive attitudes toward God were measured with five items comprising the positive attitudes subscale of the Attitudes toward God Scale (ATGS-9; Wood et al., 2010). Participants are asked to indicate on a scale from 1 (not at all true of me) to 10 (extremely true of me) the extent to which they experience each item. Items include *trust God to protect and care for you, view God as all-powerful and all-knowing,* and *feel loved by God.* Cronbach's alphas for the present sample were .98 at baseline, post-writing days 1, 2, and 3, and first follow-up, and .99 at final follow-up.

The ATGS-9 was administered twice at baseline, including after the first writing as a manipulation check, as well as on writing days, and at follow-ups.

Negative attitudes toward God. Anger and disappointment toward God was measured with four items comprising the negative subscale of the Attitudes toward God Scale (ATGS-9; Wood et al., 2010). Participants are asked to indicate on a scale from 1 (not at all true of me) to 10 (extremely true of me) the extent to which they experience each item. Items include *feel angry at God, feel that God has let you down, view God as unkind,* and *feel abandoned by God.* Cronbach's alphas for the present sample were .90 at baseline, .94 post-writing days 1 and 2, .91 post-writing day 3, .93 at first follow-up, and .95 at final follow-up.

The ATGS-9 was administered twice at baseline, including after the first writing as a manipulation check, as well as on writing days, and at follow-ups.

Social struggle. Three items reflecting interpersonal religious conflict or discontent, or *social struggle*, were selected from an unpublished version of a 24-item religious comfort and strain scale (from Exline et al., 2000; Exline, personal communication, June 10, 2009). Participants are asked to indicate on a scale from 1 (not at all true of me) to 10 (extremely true of me) the extent to which they experience each item. Items include *feel resentment toward others in your religious group, fear that religious people will condemn you for your mistakes,* and *have bad memories of past experiences with religion or religious people*. Cronbach's alphas for the present sample were .65 at baseline, .67 post-writing day 1, .72 post-writing day 2, .78 post-writing day 3, .80 at first follow-up, and .86 at final follow-up.

These items were administered twice at baseline, including after the first writing as a manipulation check, as well as on writing days, and at follow-ups.

Quest. A quest orientation toward religion was assessed with the Quest scale (Batson & Schoenrade, 1991a, 1991b). It contains 12 items representing openness to change religious beliefs, willingness to face complex questions, and a positive view of religious doubts. Participants are asked to indicate on a scale from 1 (strongly disagree) to 9 (strongly agree) their agreement with each statement (e.g., *as I grow and change, I expect my religion also to grow and change*; *I find religious doubts upsetting,* reverse-scored). The scale has evinced adequate psychometric properties among undergraduates. Cronbach's alphas for the present sample were .84 at baseline, .85 post-writing day 2, and .87 post-writing day 3 and at first and final follow-ups.

Discomfort with ambiguity. The Discomfort with Ambiguity subscale, comprised of nine items from the Need for Closure Scale (Kruglanski, Webster, & Klem, 1993), assesses intolerance of situational uncertainty on a scale from 1 (strongly disagree) to 6 (strongly agree). Items include *I feel uncomfortable when I don't understand the reason why an event occurred in my life* and *I don't like situations that are uncertain.* The subscale has demonstrated acceptable to good internal consistency reliability (Cronbach's alphas ranging from .67 to .80). Cronbach's alphas for the present sample were at .78 at baseline, .89 at first follow-up, and .88 at final follow-up.

Mastery. Mastery, or the extent to which people perceive that they have control over their lives, was assessed with the Personal Mastery Scale (Pearlin & Schooler, 1978). It contains seven items rated on a scale from 1 (strongly disagree) to 5 (strongly agree). Items include *I have little control over the things that happen to me* and *I often feel helpless in dealing with the problems of life* (both reverse-scored). The scale has demonstrated good internal consistency reliability in previous research with

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undergraduates (Cronbach's alphas ranging from .86 to .88; Park & Blumberg, 2002; Park & Fenster, 2004). Cronbach's alphas for the present sample were .71 at baseline, .72 at first follow-up, and .79 at final follow-up.

Meaning in life. The presence of and search for meaning in life was assessed with the Meaning in Life Questionnaire (MLQ; Steger, Frazier, Oishi, & Kaler, 2006). It has ten items assessing orthogonal constructs of presence of meaning (e.g., *I understand my life's meaning*) and search for meaning (e.g., *I am searching for meaning in my life*) on a scale from 1 (absolutely untrue) to 7 (absolutely true). Adequate validity and internal consistency reliability have been demonstrated, with Cronbach's alphas for both subscales ranging from .86 to .88. Cronbach's alphas for the present sample were, for presence of meaning, .88 at baseline and .86 at first and final follow-ups. For search, alphas were .89 at baseline and .92 at first and final follow-ups.

General distress. Symptoms of distress were assessed with the Depression Anxiety Stress Scale (DASS-21; Lovibond & Lovibond, 1995). Symptoms of depression (e.g., *I felt down-hearted and blue*), anxiety (e.g., *I experienced trembling (e.g., in the hands)*) and stress (e.g., *I found it difficult to relax*) were assessed on a scale from 0 (Did not apply to me at all) to 3 (Applied to me very much, or most of the time). Adequate psychometric properties have been demonstrated for these scales (Cronbach's alphas = 0.91, 0.81, and 0.89, for depression, anxiety, and stress subscales, respectively). Cronbach's alphas for the present sample were, for depression, .86 at baseline, .89 at first follow-up, and .92 at final follow-up. For anxiety, alphas were .77 at baseline, .87 at first follow-up, and .89 at final follow-up. For stress, alphas were .81 at baseline, .86 at first follow-up, and .90 at final follow-up.

Life event history. Four (baseline, final follow-up) or three (first follow-up)

questions from the Clinician Administered PTSD Scale (CAPS; Blake et al., 1998) were

selected for their ability to determine traumatic and stressful life event history without

being as detailed and personal as other life event checklists. The open-ended questions

are widely accepted for research and diagnostic purposes and permit the participant to

describe an event with minimal detail.

The CAPS questions asked at the first follow-up required the participant to

identify potentially traumatic lifetime events.

The CAPS questions asked at the first follow-up required the participant to briefly

describe the *most stressful or distressing event* that occurred since baseline.

The CAPS questions asked at the final follow-up required the participant to

briefly describe the *most stressful or distressing event* in the past six weeks.

Time since (life event history) event. Whereas the CAPS (Blake et al., 1998)

questions ask "how old were you?" for each event, in the present study, age at

victimization was not requested; instead month and year of occurrence (baseline), or

"when did the event occur?" (follow-ups) were requested to assess months since event.

Target event nomination. To identify a distressing, unresolved event,

participants were asked to describe an open, negative event, as follows:

> Please think of a very negative personal event from your life, one that you do not
> have closure on, or an "open" event. An event is open if you feel that you do not
> currently understand the event and think of it as unsettled or not yet behind you.

> Your open event might be a disappointment, a physical illness or injury, the death
> or loss of a loved one, harm done to you, or a prayer that seemed to go
> unanswered. It might be something that you suffered personally, but it could also
> involve the suffering of loved ones, other people, or animals.

This prompt was based on the work of Beike and Wirth-Beaumont (2005), who described open events, and Boals and colleagues (2011), who applied a writing paradigm to open events, with an additional prompt based on Exline (personal communication, October 14, 2010), who has conducted multiple studies of writing about spiritual struggles. Participants were provided approximately five lines to encourage brief but complete answers.

Time since event. Participants indicated month and year of occurrence to so that a time since event variable (in months) could be calculated.

Event-related distress. Participants rated their levels of stressor-related distress by answering "How distressing is this event currently for you?" on a scale from 1 to 100, based on distress ratings commonly used in post-traumatic stress treatment (e.g., Foa, Hembree, & Rothbaum, 2007).

At baseline, on writing days, and at first follow-up, this distress item was anchored to the open-negative event nominated at baseline.

At final follow-up, this distress item was anchored to the most stressful or distressing event specified as occurring during the first to final follow-up interim.

PTSD symptoms. Symptoms of post-traumatic distress were assessed with the PTSD Checklist – Civilian (PCL-C; Blanchard et al., 1996), a widely used self-report measure that corresponds with diagnostic criteria for PTSD. A validation study with a college student sample demonstrated good test-retest reliability ($r = .87$) and good internal consistency reliability (alpha = .91; Adkins et al., 2008). Given the brief timeframe for all time points in the study (10 weeks total), the PCL referred to symptoms experienced in the past two weeks. Cronbach's alphas for the present sample were .91 at

baseline and post-writing day 2, .92 post-writing day 3, .94 at first follow-up, and .95 at final follow-up.

At baseline, on writing days, and at first follow-up, PTSD symptoms were anchored to the open-negative event nominated at baseline.

At final follow-up, PTSD symptoms were anchored to the most stressful or distressing event specified as occurring during the first to final follow-up interim.

Positive religious coping. The use of two positively-valenced methods of religious coping was measured with two subscales of three items each from the religious coping scale, the RCOPE (Pargament et al., 2000): benevolent religious reappraisal (e.g., *saw my situation as part of God's plan*) and seeking spiritual support (e.g., *sought God's love and care*). Participants rated the extent to which they use each coping strategy on a scale from 0 (not at all) to 3 (a lot). Psychometric properties for the subscales reported in a validation study with college students and medically ill older adults demonstrated adequate internal consistency (Cronbach's alpha values ranging from .78 to .91) and criterion validity (Pargament et al., 2000). Cronbach's alphas for the present sample were, for benevolent religious reappraisal, .86 at baseline, .91 post-writing day 2, .92 post-writing day 3, and .93 at first and final follow-ups. For seeking spiritual support, alphas were .94 at baseline, .93 post-writing day 2, and .94 post-writing day 3 and at first and final follow-ups.

At baseline, on writing days, and at first follow-up, positive religious coping was anchored to the open-negative event nominated at baseline.

At final follow-up, positive religious coping was anchored to the most stressful or distressing event specified as occurring during the first to final follow-up interim.

Negative religious coping. Spiritual struggle in the form of negative religious coping was assessed with three subscales (of three items each) from the religious coping scale, the RCOPE (Pargament et al., 2000): spiritual discontent (e.g., *wondered whether God had abandoned me; questioned God's love for me*), punishing God reappraisal (e.g., *decided that God was punishing me for my sins; wondered what I did for God to punish me*), and reappraisal of God's powers (e.g., *questioned the power of God; realized that God cannot answer all my prayers*). Participants rated the extent to which they use each coping strategy on a scale from 0 (not at all) to 3 (A lot). Psychometric properties for the subscales reported in a validation study with college students and medically ill older adults demonstrated adequate internal consistency (Cronbach's alpha values ranging from 0.78 to 0.91) and criterion validity (Pargament et al., 2000). Cronbach's alphas for the present sample were, for spiritual discontent, .82 at baseline, .84 post-writing day 2, .82 post-writing day 3, .83 at first follow-up, and .77 at final follow-up. For punishing God reappraisal, alphas were .81 at baseline, .83 post-writing day 2, and .84 post-writing day 3, .82 at first follow-up, and .86 at final follow-up. For reappraisal of God's powers, alphas were .66 at baseline, .68 post-writing day 2, .76 post-writing day 3, .73 at first follow-up, and .77 at final follow-up.

At baseline, on writing days, and at first follow-up, negative religious coping was anchored to the open-negative event nominated at baseline.

At final follow-up, negative religious coping was anchored to the most stressful or distressing event specified as occurring during the first to final follow-up interim.

Meaning violation. The extent to which spiritual struggle reflects a meaning discrepancy was assessed by measuring appraisals of the event with the Meaning

Assessment Scale (Park & Edmondson, 2010; Park, 2008). The scale is in development

(Park & Edmondson, 2010); however, psychometric properties appear to be adequate.

Cronbach's alpha of .88 was reported with undergraduates (Park, 2008). The scale

includes five items measuring belief violations; e.g., *how much does this event violate*

your sense that God is in control?), and 12 items measuring goal violations (e.g.,

companionship, inner peace), on a scale from 1 (not at all) to 4 (very much). A belief

violation scale was calculated by summing the five belief violation items. Cronbach's

alphas for the present sample were .70 at baseline, .71 post-writing day 2, .80 post-

writing day 3, and .82 at first and final follow-ups. A goal violation scale was calculated

by summing the12 goal violation items. Although goal violations may not be

experienced across these varied domains, internal reliability for the present sample was

high; Cronbach's alphas were .92 at baseline, .91 post-writing day 2, .92 post-writing

day 3, .93 at first follow-up, and .94 at final follow-up.

     At baseline, on writing days, and at first follow-up, meaning violation was

anchored to the open-negative event nominated at baseline.

     At final follow-up, meaning violation was anchored to the most stressful or

distressing event specified as occurring during the first to final follow-up interim.

     Stress-related growth. The Stress-Related Growth Scale-Short Form (SRGS-SF;

Park, Cohen, & Murch, 1996) consists of fifteen items measuring perceptions of positive

changes due to a stressful life event, rated on a scale from 0 (not at all) to 2 (a great deal).

The SRGS has demonstrated good internal consistency reliability (e.g., Cronbach's alpha

= .88; Park & Blumberg, 2002). Cronbach's alphas for the present sample were .93 at

baseline and post-writing day 2, .95 post-writing day 3 and at first follow-up, and .96 at final follow-up.

At baseline, on writing days, and at first follow-up, stress-related growth was anchored to the open-negative event nominated at baseline.

At final follow-up, stress-related growth was anchored to the most stressful or distressing event specified as occurring during the first to final follow-up interim.

Closure. Psychological closure to a past event (a measure of resolution) was assessed with five items that have demonstrated good psychometric properties with undergraduates (e.g., internal consistency coefficients of .83 and .86; Beike & Wirth-Beaumont, 2005; Boals et al., 2011). Participants are asked to indicate on their agreement with each item on a scale from 1 (completely disagree) to 10 (completely agree) (e.g., *I have put the event behind me completely; the event is "unfinished business" for me*, reverse-scored). Cronbach's alphas for the present sample were .83 at baseline and post-writing day 2, .86 post-writing day 3, and .85 at first follow-up.

At baseline, on writing days, and at first follow-up, closure was anchored to the open-negative event nominated at baseline.

Writing prompts. Six writing prompts were administered over the three writing days (three days of control prompts and three days of spiritual struggle-related prompts). Complete text of each prompt is provided in the Appendix. The control involved writing about one's time management; prompts were adapted from Sloan and Marx (2004). Struggle-related prompts were adapted from Boals and colleagues (2011), who applied a writing paradigm to open events and Exline (personal communication, October 14, 2010), who has conducted multiple studies of writing about spiritual struggles. The third day

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struggle-related prompt was also based on the work of Kross and colleagues (Kross & Ayduk, 2008; Kross, Ayduk, & Mischel, 2005), who have investigated self-distancing in emotional processing.

Emotional response to writing prompts. Emotional response to writing prompts (for manipulation check) was assessed with the ATGS-9 and with the positive and negative affect scale (PANAS; Watson, Clark et al., 1988). The PANAS is widely-used scale that includes 20 adjectives and asks participants to rate to what extent they feel this way "right now" on a scale from 1 (very slightly or not at all) to 5 (extremely). Internal consistency reliabilities referring to "right now" for the positive and negative affect subscales have been reported as .89 and .85, respectively (Clark, & Tellegen, 1988). Cronbach's alphas for the present sample were, for positive affect, .88 post-writing day 1, .91 post-writing day 2, and .92 post-writing day 3. For negative affect, alphas were .79 post-writing day 1, .87 post-writing day 2, and .86 post-writing day 3.

The PANAS was administered after writing on each writing day.

Detailed Order of Presentation

Baseline/writing day 1. At baseline, participants indicated consent to participate and provided demographic information. They then completed most measures, nominated their target event, and responded to event-related measures. They then were presented either the struggle-related or control prompt for day 1 and wrote for ten minutes. Finally, they completed manipulation check measures. Measures were presented in the following order:

1. MLQ
2. Mastery
3. Discomfort with ambiguity
4. DASS-21

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5. Religious practices
6. Religious social support
7. CAPS (Life event history)
8. Target event nomination
9. Distress (0-100)
10. Month/year of occurrence
11. PCL-C (anchored to target event)
12. Positive and negative religious coping (anchored to target event)
13. Quest
14. ATGS-9
15. Social Struggle
16. Park Beliefs and Goals (anchored to target event)
17. SRGS (anchored to target event)
18. Closure (anchored to target event)
19. Writing
20. PANAS
21. ATGS-9
22. Social Struggle

Writing days 2 and 3. On writing days 2 and 3, participants again indicated consent to participate and were presented either the struggle-related or control prompt for day 2 or day 3. If they received the struggle prompt, they were also reminded of their target event first. Then they wrote for ten minutes. Next, they completed manipulation check measures and finally event-related measures. Both control and struggle groups were reminded of their event in order to complete the event-related measures. Measures were presented in the following order:

1. Writing
2. PANAS
3. ATGS-9
4. Social Struggle
5. Distress (0-100)
6. PCL-C (anchored to target event)
7. Positive and negative religious coping (anchored to target event)
8. Quest
9. Park Beliefs and Goals (anchored to target event)
10. SRGS (anchored to target event)
11. Closure (anchored to target event)

First follow-up. At the first follow-up, four weeks after baseline, participants

again indicated consent to participate and were prompted to recall the negative event and

complete selected event-related and other measures that were assessed at baseline. The

CAPS questions were administered to capture any interim stressors or trauma that

occurred between baseline and first follow-up. Measures were presented in the following

order:

1. Distress (0-100) (anchored to target event)
2. PCL-C (anchored to target event)
3. Positive and negative religious coping (anchored to target event)
4. Quest
5. ATGS-9
6. Social Struggle
7. Park Beliefs and Goals (anchored to target event)
8. SRGS (anchored to target event)
9. Closure (anchored to target event)
10. MLQ
11. Mastery
12. Discomfort with ambiguity
13. DASS-21
14. Religious practices
15. Religious social support
16. CAPS (Past four weeks)

Final follow-up. At the final follow-up, ten weeks after baseline, participants

again consented to participate, and response to a subsequent stressor was assessed. The

CAPS questions were administered to capture any interim stressors or trauma that

occurred between follow-ups. Participants were asked to select their most stressful

interim event and report their PTSD symptomatology in relation to it on the PCL-C and

their coping with the event on the RCOPE positive and negative subscales. Finally, all

participants completed selected measures that were assessed at baseline and follow-up to

capture any changes since baseline. Measures were presented in the following order:

1. CAPS (Past six weeks)
2. New event nomination (past six weeks)

3. Distress (0-100) (anchored to new event)
4. PCL-C (anchored to new event)
5. Positive and negative religious coping (anchored to new event)
6. Park Beliefs and Goals (anchored to new event)
7. SRGS (anchored to new event)
8. Quest
9. ATGS-9
10. Social Struggle
11. MLQ
12. Mastery
13. Discomfort with ambiguity
14. DASS-21
15. Religious practices
16. Religious social support

Analytic Plan

Attrition analyses were conducted with independent samples t-tests.

Characteristics of the full sample are presented. To evaluate spiritual struggle's

relationships with negative outcomes, correlations were conducted among study

variables.

To evaluate the impact of the struggle induction/resolution intervention versus the

control writing, analyses of variance (ANOVAs) were conducted. A "true" condition

dichotomous intervention variable was created in which 0 indicated zero days of struggle

writing (true control; $N = 61$), and 1 indicated three days of struggle writing (true

intervention; $N = 56$). The participants in Wave 2 who received one or two days of the

struggle intervention were excluded from these analyses. ANOVAs were first conducted

to test for possible baseline differences among the intervention and control groups on

demographic and study variables, and then to test for differences on post-writing

variables.

To test for resolution of spiritual struggle, repeated-measures analysis of variance

(RMANOVAs), with the true intervention variable as the between-subjects variable and

the time of measurement as the repeated-measures variable were conducted. When baseline differences existed, repeated-measures analyses of covariance (RMANCOVAs) were conducted to test for differences in subsequent scores while controlling for baseline scores. RMANOVAs were also conducted to assess changes in outcomes in the intervention group relative to the control group.

Finally, to evaluate the effect of resolving spiritual struggle on outcomes, Latent Growth Curve Modeling, or structural equation modeling of latent growth curves, in AMOS (version 16.0) was used to analyze the trajectory of struggle and relationship between struggle's resolution and outcomes. Latent variable modeling is useful for addressing measurement error, which tends to attenuate the size of correlations. Growth curves in AMOS use full information maximum likelihood estimation to estimate means and intercepts regardless of missing data. A second-order growth curve model of change in struggle over time (so called because both struggle and change are represented by latent variables) was created in which (1) struggle was represented by a latent variable at each time point, which was measured by four struggle variables, and (2) change is represented by the latent slope variable.

To handle missing data, the full application of intention-to-treat analysis was not possible, as complete outcome data were not available for all initial participants (Lachin, 2007). Instead, analyses were limited to only those individuals who completed the study, and an evaluation of attrition is included in the Results. Additionally, sensitivity models were conducted by comparing results using the available data to results using a complete data set with last-observation carried forward (Lachin, 2000; Hollis & Campbell, 1999; Montori & Guyatt, 2001). Appreciable differences in results are reported.

Results

Attrition Analyses

In total, 193 students started the first survey, 18 of whom ended participation by the final follow-up. Independent samples t-tests indicated no differences between participants who did not complete the study compared to participants who completed the study on demographics, time since event, or event-related distress. Half of this attrition (9 participants) was due to failure to comply with instructions rather than dissatisfaction with the study per se (see below). An additional five participants may have completed the final follow-up had they been emailed a reminder to do so.

Nine participants ended participation before the final writing day. Participants were required to complete the writing sessions on three consecutive days. Eight (three in wave 3, four in wave 2, and one in wave 1) of the nine students were not permitted to complete the remainder of the study because they had not completed one of the writing day surveys in the required time frame. The ninth student informed the researcher that he had ended his participation in the study after the first writing day because he had already fulfilled his credit requirements for his class. Of the nine, five received the control prompts, three received the struggle-related prompts, and one received the struggle prompt on the first day and the control prompt on the second day. These nine participants were lower on negative attitudes toward God at baseline, $t(27.94) = 4.92$, $p < .001$, and after the first, $t(89.61) = 5.88$, $p < .001$, and second writing days, $t(23.74) = 3.89$, $p = .001$, compared to the participants who remained in the study, suggesting that they may not have found participating in the remainder of the study to be relevant.

Two participants failed to return for the first follow-up. Both were from the first wave of data collection, and both were female, first-year students. One, who had completed the control condition, did not respond to the invitational email or a reminder. The other, who had completed the struggle condition, responded to a reminder email stating she wished to drop out, because "all [her] answers would be the same." These two participants were lower on baseline mastery, $t(191) = 2.42$, $p = .017$, higher on baseline punishing God appraisal coping, $t(188) = -3.71$, $p < .001$, and reappraisal of God's powers coping, $t(187) = -6.55$, $p < .001$, and lower on stress-related growth after the second writing day, $t(191) = 2.20$, $p = .029$, compared to the participants who remained in the study.

Seven participants failed to return for the final follow-up. Two from wave 3 did not reply to the email or a reminder. Both had completed the struggle condition. Five from wave 2 did not reply to the email and were not sent a reminder. Of those, one had completed the control condition, one had completed the struggle condition, and two had received two days of the control condition followed by one day of the struggle condition. One from wave 1, who had completed the control condition, did not reply to the email or a reminder. These seven participants were lower on punishing God appraisal coping, $t(15.71) = 3.48$, $p = .003$, and reappraisal of God's powers coping, $t(9.27) = 3.45$, $p = .007$, at first follow-up compared to the participants who completed the study. Given their lower levels of struggle, these participants may not have found participating in the final follow-up to be relevant.

Missing Data Handling

Attrition. A conservative method of handling missing data points was used: last observation carried forward. For participants who did not complete the study, the last value provided for each calculated variable was imputed for subsequent time points. Analyses were conducted on the original data set using all available data as well as on the last observation carried forward-imputed data set, a sensitivity model, and compared.

Lack of engagement. A "not engaged" dichotomous variable was created to identify participants who provided data but, based on visual inspection of their writing and responses to data points, failed to invest acceptable effort in the surveys. Three participants were identified as investing unacceptable effort, because they failed to write more than a few sentences and appeared to respond to items randomly (e.g., providing the same number response for all items on multiple questionnaires, such that their responses were internally inconsistent). Analyses were conducted omitting these participants.

Additionally, one participant's data had more than 50% missing data at the final follow-up; the participant was considered to have not satisfactorily participated in the study at the final follow-up. His data were omitted from calculations involving the final follow-up.

Notably, some students, frequently non-native English speakers, simply wrote less in response to intervention prompts If visual inspection of their data points confirmed that they responded to questionnaire items in a thoughtful, consistent manner (e.g., not answering the same number for all items or skipping most items), their data were not excluded on the basis of low engagement.

Missing date of target event. Four participants did not indicate the month or year of the occurrence of their target event. For two of them, inspection of the writing

indicated that the target event date was provided in response to the previous CAPS items; therefore, the CAPS item date was used to calculate time since target event. A third student indicated that his event occurred when he was "young." Analysis of writing indicated the event occurred when the participant was a child who was old enough to understand what had happened. A conservative estimate of age ten for the event occurring was used to calculate time since target event. Month and year of target event occurrence could not be inferred for one student; this missing data point was included in the complete data set.

Data Transformation: Univariate and Multivariate Normality

The ATGS-9 negative attitudes toward God and negative religious coping variables were highly positively skewed. Transformations were attempted based on standard recommendations (Tabachnik & Fidell, 2006). Severely positively skewed variables were transformed to their inverse, plus a constant to prevent dividing by zeros. Substantially positively skewed variables were transformed to their base-10 logarithm, plus a constant to prevent dividing by zeros. However, analysis of the skew statistics and histograms indicated that skew was not improved by these transformations; in fact, the resulting transformed variables evinced comparable magnitude of skew in the opposite direction. Because transformations are intended to improve the likelihood of detecting significant relationships (Tabachnik & Fidell, 2006), the original, un-transformed variables were used, and analyses were considered to be relatively conservative.

Sample Characteristics

Mean scores for major variables are summarized in Tables 1, 2, and 3.

Religious practices and beliefs. At baseline, public religious activities ranged from 0 (reflecting "never") to 10 (reflecting "more than 1x/week" for both items), with a mean of 2.31 (*SD* = 2.34). Private religious practices ranged from 0 (reflecting "never") to 20 (scale maximum = 21), with a mean of 3.90 (*SD* = 4.31). Religious identification ranged from 0 ("not at all") to 3 ("very"), with a mean of 1.03 (*SD* = .953). Spiritual identification ranged from 0 ("not at all") to 3 ("very"), with a mean of 1.45 (*SD* = .942). Frequency of religious/spiritual social support ranged from 0 ("not applicable") to 4 ("very often"), with a mean of .90 (*SD* = 1.08). Frequency of non-religious/spiritual social support ranged from 0 ("not applicable") to 4 ("very often"), with a mean of 2.51 (*SD* = 1.26). A minority of participants (*N* = 23, 12.2%) indicated they were currently involved in a religious club or youth group.

Positive attitudes toward God. At baseline, positive attitudes toward God ranged from 0 (reflecting "not at all true of me") to 50 (i.e., responding "extremely true of me" to all five items), with a mean of 24.61 (*SD* = 18.44).

Negative attitudes toward God. At baseline, negative attitudes toward God ranged from 0 (reflecting "not at all true of me") to 40 (i.e., responding "extremely true of me" to all four items), with a mean of 5.35 (*SD* = 8.25).

Social struggle. At baseline, social struggle ranged from 0 (reflecting "not at all true of me") to 28 (scale maximum = 30), with a mean of 6.14 (*SD* = 6.76).

Quest. At baseline, quest scores ranged from 17 to 99 (scale maximum = 108), with a mean of 55.14 (*SD* = 17.32). Paired *t*-tests were conducted to assess differences across baseline through writing days and follow-ups for the whole sample. Quest dropped significantly between post-writing day 2 and post-writing day 3, $t(188) = 2.52$, *p*

= .013, and between baseline and post-writing day 3, $t(187) = 3.05$, $p = .003$. Mean scores on Quest rebounded slightly through final follow-up, and the differences from baseline or first follow-up to final follow-up were non-significant (ps > .295).

Discomfort with ambiguity. At baseline, discomfort with ambiguity ranged from 20 (minimum scale score = 9, which reflects high tolerance for ambiguity) to 53 (maximum scale score = 54, reflecting high discomfort with ambiguity), with a mean of 38.89 ($SD = 6.70$).

Mastery. At baseline, mastery ranged from 14 (minimum scale score = 7) to 35 (reflecting "strongly agree" on all 7 items), with a mean of 26.72 ($SD = 3.96$).

Meaning in life. At baseline, presence of meaning in life ranged from 5 (reflecting "absolutely untrue of me") to 35 (reflecting "absolutely true of me" on all 5 items), with a mean of 23.95 ($SD = 6.16$). Search for meaning ranged from 5 to 35, with a mean of 25.14 ($SD = 5.98$).

General distress. At baseline, DASS stress ranged from 0 (reflecting "did not apply to me at all") to 19 (scale maximum = 21), with a mean of 6.74 ($SD = 4.30$). At baseline, DASS anxiety ranged from 0 to 17, with a mean of 3.61 ($SD = 3.47$). At baseline, DASS depression ranged from 0 to 21, with a mean of 4.01 ($SD = 3.99$).

Life event history. At baseline, responses to the first item, regarding one's life being in danger (endorsed by 36 participants) included primarily physical injuries due to accidents, but also sexual assaults and one instance of a suicide attempt. Responses to the second item, regarding being threatened with injury (endorsed by 21 participants) included near-injuries due to accidents as well as two reports of past suicidal ideation. Responses to the third item, regarding witnessing or finding out about such a threat to

another person (endorsed by 73 participants) included primarily deaths of friends or family as well as witnessing violence against others.

Interim events between baseline and first follow-up. At first follow-up, four participants indicated they had experienced serious threats to their life or physical integrity in the four-week interim. Two did not indicate the details or time of occurrence. One reported one week prior having been intoxicated and in unsafe circumstances. The fourth student reported an ongoing incident with an abusive parent. Two additional students responded to the second item, one of whom reported their grandmother becoming ill. Ten additional students responded to the third item, reporting instances of illnesses and injuries occurring to friends and family.

Interim events between follow-ups. At final follow-up, six participants indicated they had experienced serious threats to their life or physical integrity in the six-week interim. Four did not indicate details or time of occurrence. One reported a sprained ankle and the other a sexual assault. Six participants responded to the second item, one of whom reported continuing illness of their grandmother, one describing a near car-accident, one nearly passing out, one a near-fight, and one a head injury. Fourteen students endorsed the third item, reporting knowing of others' assaults, self-harm and suicide attempts, completed suicides, and other deaths.

Target event nomination at baseline. Categories of events selected by participants at baseline as their open, unresolved, stressful, negative event are summarized in Table 4.

Time since event. At baseline, time since the event occurred or most recently occurred ranged from 0 to 208 months, with a mean of 29.78 months ($SD = 40.79$). An

ANOVA indicated there were no statistically significant differences by event type in months since event. ($p = .080$).

      Event related distress. Distress ratings ranged from 1 ($N = 3$) to 100 ($N = 5$) with a mean of 59.97 ($SD = 23.93$). Notably, reported distress was very subjective, with the highest ratings being associated with events involving suicidal ideation and sudden bereavement as well as academic failures. An ANOVA indicated there were no significant differences by event type in distress ratings ($p = .647$).

      Over the subsequent writing days and first follow-up, the mean distress ratings for the sample decreased. Post writing day 2, distress ratings ranged from 0 to 100 with a mean of 46.75 ($SD = 26.76$). Post writing day 3, distress ratings ranged from 0 to 100 with a mean of 41.72 ($SD = 27.69$). At first follow-up, distress ratings ranged from 0 to 98 with a mean of 35.71 ($SD = 25.29$).

      PTSD symptoms associated with target event. At baseline, summed PTSD symptom scores ranged from 17 (reflecting "not at all") to 72, with a mean of 32.42 ($SD = 11.69$). The sample mean falls below suggested PTSD diagnostic cutoffs of 44 and 37 (Blanchard et al., 1996; Cook, Elhai, & Arean, 2005) but exceeds subclinical mean scores observed in other college student samples (e.g., 27.8 at baseline and 24.5 at follow-up; Adkins et al., 2008), and one-third ($N = 61$) of participants met or exceeded the score cutoff of 37.

      Over the subsequent writing days and first follow-up, the PCL scores decreased. Post writing day 2, the PCL scores ranged from 17 to 69 with a mean of 29.61 ($SD = 10.60$). Post writing day 3, the PCL scores ranged from 17 to 69 with a mean of 28.09

(*SD* = 10.80). At first follow-up, the PCL scores ranged from 17 to 69 with a mean of

26.89 (*SD* = 10.71).

     Positive religious coping with target event. At baseline, benevolent religious

reappraisal coping ranged from 0 (reflecting "not at all") to 9 (i.e., responding "a lot" to

all three items), with a mean of 2.78 (*SD* = 2.77). Seeking spiritual support coping

ranged from 0 to 9, with a mean of 3.12 (*SD* = 3.16).

     Negative religious coping with target event. At baseline, spiritual discontent

coping ranged from 0 (reflecting "not at all") to 9 (i.e., responding "a lot" to all three

items), with a mean of 1.20 (*SD* = 2.05). Punishing God reappraisal coping ranged from

0 to 9, with a mean of 1.11 (*SD* = 1.83). Reappraisal of God's powers coping ranged

from 0 to 9, with a mean of 2.00 (*SD* = 2.13).

     Meaning violation associated with target event. At baseline, belief violation

ranged from 5 (indicating some missing data points on this scale) to 20 (reflecting "very

much" for all 5 items), with a mean of 11.35 (*SD* = 3.33).   Goal violation ranged from 12

(reflecting "not at all") to 48 (i.e., responding "a lot" to all 12 items), with a mean of

22.21 (*SD* = 8.90).

     Stress-related growth associated with target event. At baseline, stress-related

growth ranged from 0 (reflecting "not at all") to 30 (i.e., responding "a great deal" to all

15 items), with a mean of 16.34 (*SD* = 8.40).

     Closure associated with target event. At baseline, closure ranged from 4

(reflecting "completely disagree" on all five items, with some missing data points) to 49

(scale maximum = 50), with a mean of 19.94 (*SD* = 11.05).

Final follow-up event nomination. Events selected by participants as their worst event experienced between the first and final follow-ups included academic stress, which is expected given that the follow-up occurred near the end of the semester. Additionally, many instances of other serious events, including deaths and assaults, were reported.

Time since event. At final follow-up, time since the event occurred ranged from 1 to 7 weeks, with a mean of 3.04 weeks ($SD=1.80$).

Event related distress. At final follow-up, distress ratings associated with the new event ranged from 0 ($N=9$) to 100 ($N=1$) with a mean of 45.91 ($SD=27.38$). As with the baseline target event, reported distress was subjective, with the highest ratings being associated with events involving assault as well as academic distress.

PTSD symptoms associated with new event. At final follow-up, PTSD symptom scores associated with the new event ranged from 17 to 73 with a mean of 29.75 ($SD=13.15$). One quarter ($N = 48$) of participants met or exceeded the score cutoff of 37 (Blanchard et al., 1996; Cook, Elhai, & Arean, 2005).

Positive religious coping with new event. At final follow-up, benevolent religious reappraisal coping ranged from 0 (reflecting "not at all") to 9 (i.e., responding "a lot" to all three items), with a mean of 2.13 ($SD = 2.85$). Seeking spiritual support coping ranged from 0 to 9, with a mean of 2.73 ($SD = 3.07$).

Negative religious coping with new event. At final follow-up, spiritual discontent coping ranged from 0 (reflecting "not at all") to 5 (scale maximum = 9), with a mean of 0.47 ($SD = 1.10$). Punishing God reappraisal coping ranged from 0 to 6, with a mean of 0.48 ($SD = 1.21$). Reappraisal of God's powers coping ranged from 0 to 8 with a mean of 1.14 ($SD = 1.80$).

Meaning violation associated with new event. At final follow-up, belief

violation ranged from 4 (indicating some missing data points on this scale) to 20

(reflecting "very much" for all 5 items), with a mean of 9.37 ($SD = 3.54$). Goal violation

ranged from 11 (reflecting "not at all" with some missing data points) to 48 (i.e.,

responding "a lot" to all 12 items), with a mean of 19.16 ($SD = 7.95$).

Stress-related growth associated with new event. At final follow-up, stress-

related growth ranged from 0 (reflecting "not at all") to 30 (i.e., responding "a great deal"

to all 15 items), with a mean of 11.19 ($SD = 8.86$).

Intercorrelations among Spiritual Struggle Measures

Correlations among spiritual struggle measures at baseline and follow-ups are

summarized in Tables 1, 2, and 3. Most spiritual struggle measures were positively

correlated at baseline (rs between .19 and .68), with the exception of quest with negative

attitudes toward God ($r = .12$, $p = .093$). Quest did not correlate with punishing God

reappraisal coping, spiritual discontent coping, or negative attitudes toward God post-

writing day 2 but did correlate with spiritual discontent coping ($r = .16$, $p = .028$) and

negative attitudes toward God ($r = .15$, $p = .045$) post-writing day 3 and at first follow-up

($r = .19$, $p = .008$; $r = .16$, $p = .031$, respectively). At final follow-up, all measures of

struggle were positively correlated (rs between .15 and .73), except quest with punishing

God reappraisal coping and spiritual discontent coping, and social struggle with

punishing God reappraisal coping. The sensitivity model results were comparable.

Correlations of Spiritual Struggle Measures with Study Variables

Correlations between measures of struggle and study variables at baseline are

summarized in Table 1. Only punishing God reappraisal coping was consistently related

to negative outcomes, although spiritual discontent coping related to greater goal and belief violation, and reappraisal of God's powers related to greater depressive symptoms as well. All measures except quest related to greater PTSD symptoms. Quest related only to greater search for meaning ($r = .18$, $p = .015$) and greater discomfort with ambiguity ($r = .17$, $p = .021$). No measures of struggle were related to presence of meaning or stress-related growth.

Correlations between measures of concurrent struggle and study variables at first follow-up are summarized in Table 2. Most measures were more consistently related to negative outcomes. All measures except quest related to greater PTSD symptoms. Quest related only to greater search for meaning ($r = .22$, $p = .002$) and greater belief violation ($r = .25$, $p = .001$). Negative attitudes toward God were related to less presence of meaning ($r = -.20$, $p = .006$), and reappraisal of God's powers coping was related to stress-related growth ($r = .16$, $p = .029$).

Correlations between measures of concurrent struggle and study variables at final follow-up are summarized in Table 3. Most measures were more consistently related to negative outcomes. All measures except quest related to greater PTSD symptoms. Quest related to greater search for meaning ($r = .27$, $p < .001$), less mastery ($r = -.16$, $p = .028$), and greater depressive symptoms ($r = .18$, $p = .016$). Both negative attitudes toward God and punishing God reappraisal coping were related to less presence of meaning ($r = -.20$, $p = .006$; $r = -.15$, $p = .048$). Spiritual discontent coping, punishing God reappraisal coping, and reappraisal of God's powers coping were all related to stress-related growth ($r = .19$, $p = .011$; $r = .17$, $p = .017$; $r = .33$, $p < .001$) and meaning violations (rs between .24 and .30). The sensitivity model results were comparable.

Intervention Group Differences

Baseline. ANOVAs revealed some true intervention group differences at baseline. The control group scored higher on baseline search for meaning, $F(1, 115) = 5.94$ $p = .016$. The struggle group scored higher on baseline spiritual discontent coping, $F(1, 114) = 7.64$, $p = .007$. There were no differences on demographics, other religiousness variables, or other study variables. The true conditions did not differ in time since event, $F(1, 114) = .013$, $p = .908$.

Manipulation check. As hypothesized, the struggle intervention group scored higher than the control group on negative attitudes toward God after each writing session, $F(1, 115) = 4.17$ $p = .043$; $F(1, 115) = 9.50$ $p = .003$; and $F(1, 114) = 4.09$ $p = .045$, respectively. ANOVAs revealed no post-writing group differences on PANAS negative affect or social struggle. The sensitivity model results were identical.

Changes over Time in Study Variables by Intervention Group

RMANOVA analyses were conducted using the subset of the sample that received the true conditions; that is, three days of the struggle-related writing prompts ($N = 56$) or three days of the control writing prompts ($N = 61$). Analyses use every time point in which the variable was measured, including the final follow-up, which for event-related measures, was anchored to a different event. Because true conditions groups differed on baseline search for meaning and spiritual discontent coping, these baseline levels are controlled in additional RMANCOVAs. The sensitivity model results were identical.

Religious practices. For public religious activities, multivariate tests indicated no significant effect for time, $p = .191$, nor time by condition interaction, $p = .207$. For

private religious practices, multivariate tests indicated a significant effect for time by condition interaction, $F(2, 113) = 4.25$, $p = .017$, $\eta_p^2 = .07$, and tests of within-subjects contrasts indicated this effect was quadratic, $F(1) = 8.50$, $p = .004$, $\eta_p^2 = .07$, such that the control group peaked in private practices by first follow-up but declined through final follow-up, whereas the struggle group decreased through first follow-up but rebounded by final follow-up.

Positive attitudes toward God. For positive attitudes toward God, multivariate tests indicated no significant effect for time, $p = .152$, nor time by condition interaction, $p = .508$.

Negative attitudes toward God. For negative attitudes toward God, multivariate tests indicated a significant effect for time, $F(5, 110) = 3.70$, $p = .004$, $\eta_p^2 = .14$, and tests of within-subjects contrasts indicated this effect was quadratic, $F(1) = 13.029$, $p < .001$, $\eta_p^2 = .10$, such that both groups declined through post-writing day 3 then increased through follow-ups. Pairwise comparisons indicated that scores post-writing day 3 were significantly lower than baseline ($p = .005$).

Social struggle. For social struggle, multivariate tests indicated a significant effect for time, $F(5, 110) = 11.23$, $p < .001$, $\eta_p^2 = .34$, and for time by condition interaction, $F(5, 110) = 2.57$, $p = .031$, $\eta_p^2 = .11$. Tests of within-subjects contrasts indicated the effect for time was order 5, $F(1) = 3.63$, $p = .003$, $\eta_p^2 = .08$, and the effect for the interaction was quadratic, $F(1) = 7.51$, $p = .034$, $\eta_p^2 = .04$, such that both groups declined through post-writing day 3 and increased through final follow-up, but the control group did so gradually while the struggle group did so sharply (i.e., steep slopes). Pairwise comparisons indicated that scores post-writing days were significantly lower

than baseline (p s < .026), and scores at follow-ups were significantly higher than post-writing day 3 (p s < .007).

Quest. For Quest, multivariate tests indicated no significant effect for time, p = .342, nor time by condition interaction, p = .917.   Quest remained fairly constant across time for both groups.

Discomfort with ambiguity. For discomfort with ambiguity, multivariate tests indicated a significant effect for time, $F(2, 114) = 5.72$, $p = .004$, $\eta_p^2 = .09$, and tests of within-subjects contrasts indicated this effect was linear, $F(1) = 10.42$, $p = .002$, $\eta_p^2 = .08$, such that both groups generally declined in discomfort with ambiguity over time. Pairwise comparisons indicated that scores at follow-ups were significantly lower than at baseline ($ps < .015$).

Mastery. For mastery, multivariate tests indicated no significant effect for time, $p = .077$, nor time by condition interaction, $p = .713$.

Meaning in life. For presence of meaning, multivariate tests indicated a significant effect for time, $F(2, 114) = 14.29$, $p < .001$, $\eta_p^2 = .20$, and tests of within-subjects contrasts indicated this effect was quadratic, $F(1) = 7.82$, $p = .006$, $\eta_p^2 = .06$. Pairwise comparisons indicated that scores at follow-ups were significantly lower than at baseline ($ps < .001$). Both groups declined through first follow-up, and whereas the control group rebounded slightly, and the struggle group continued to decline through final follow-up, group differences were not significant.

For search for meaning, multivariate tests indicated a significant effect for time, $F(2, 114) = 6.04$, $p = .003$, $\eta_p^2 = .10$, and tests of within-subjects contrasts indicated this effect was linear, $F(1) = 11.52$, $p = .001$, $\eta_p^2 = .09$, such that both groups declined

through final follow-up. Pairwise comparisons indicated that scores at follow-ups were significantly lower than at baseline ($ps < .024$). When controlling for baseline levels of search for meaning in an RMANCOVA analysis, no effects remained statistically significant.

General distress. For DASS stress, multivariate tests indicated a significant effect for time, $F(2, 114) = 8.60$, $p < .001$, $\eta_p^2 = .13$, and tests of within-subjects contrasts indicated this effect was quadratic, $F(1) = 11.84$, $p = .001$, $\eta_p^2 = .09$, such that both groups declined through first follow-up then tapered (control) or rebounded (struggle) through final follow-up. Pairwise comparisons indicated that scores at first follow-up were significantly lower than at baseline ($p < .001$). For DASS anxiety, multivariate tests indicated no significant effect for time, $p = .108$, nor time by condition interaction, $p = .622$. For DASS depression, multivariate tests indicated no significant effect for time, $p = .271$, nor time by condition interaction, $p = .077$.

PTSD symptoms. For PTSD symptoms, multivariate tests indicated a significant effect for time, $F(4, 112) = 9.10$, $p < .001$, $\eta_p^2 = .25$, and tests of within-subjects contrasts indicated this effect was quadratic, $F(1) = 24.18$, $p < .001$, $\eta_p^2 = .17$, such that for both groups symptoms decreased through first follow-up, as related to the target event, then rebounded at final follow-up, as related to the new event. Pairwise comparisons indicated that scores post-writing days and at first follow-up were significantly lower than baseline ($ps < .012$). Group differences were not statistically significant.

Positive religious coping. For benevolent religious reappraisal coping, multivariate tests indicated a significant effect for time, $F(4, 111) = 4.97$, $p = .001$, $\eta_p^2 = .15$, and tests of within-subjects contrasts indicated this effect was linear, $F(1) = 17.39$, p

$< .001$, $\eta_p^2 = .13$, such that both groups generally decreased over time. Pairwise comparisons indicated that score at final follow-up was significantly lower than baseline and post-writing days ($ps < .021$). Group differences were not statistically significant.

For seeking spiritual support coping, multivariate tests indicated a significant effect for time, $F(4, 111) = 2.53$, $p = .044$, $\eta_p^2 = .08$, and tests of within-subjects contrasts indicated this effect was linear, $F(1) = 4.74$, $p = .032$, $\eta_p^2 = .04$, such that both groups generally decreased over time. Pairwise comparisons indicated that score at first follow-up was significantly lower than post-writing day 3 ($p = .042$). Although inspection of the means plot indicated that the struggle group increased in this coping at final follow-up in relation to the new event, group differences were not statistically significant.

Negative religious coping. For spiritual discontent coping, multivariate tests indicated a significant effect for time, $F(4, 111) = 3.55$, $p = .009$, $\eta_p^2 = .11$, such that spiritual discontent coping decreased over time for both groups. Tests of within-subjects contrasts indicated this effect was linear, $F(1) = 13.62$, $p < .001$, $\eta_p^2 = .11$. Pairwise comparisons indicated that scores at follow-ups were significantly lower than baseline (ps $= .020$ and $.003$, respectively).

When controlling for baseline levels of spiritual discontent coping in an RMANCOVA analysis, the interaction of baseline spiritual discontent coping with time was significant, $F(3, 111) = 19.44$, $p < .001$, $\eta_p^2 = .34$, and the main effect for time was no longer significant. Tests of within-subjects contrasts indicated the interaction effect was quadratic, $F(1) = 9.63$, $p = .003$, $\eta_p^2 = .08$. Group differences were not statistically significant. Pairwise comparisons indicated that the score at final follow-up was significantly lower than post-writing day 2, controlling for baseline ($p = .048$).

For punishing God reappraisal coping, multivariate tests indicated a significant effect for time, $F(4, 111) = 4.26$, $p = .003$, $\eta_p^2 = .13$, such that this coping decreased over time for both groups. Tests of within-subjects contrasts indicated this effect was linear, $F(1) = 12.79$, $p = .001$, $\eta_p^2 = .09$. Pairwise comparisons indicated each time point was significantly lower than baseline ($ps < .028$) Group differences were not statistically significant.

For reappraisal of God's powers coping, multivariate tests indicated a significant effect for time, $F(4, 111) = 5.98$, $p < .001$, $\eta_p^2 = .18$, such that this coping decreased over time for both groups. Tests of within-subjects contrasts indicated this effect was quadratic, $F(1) = 4.32$, $p = .040$, $\eta_p^2 = .04$, such that both groups peaked during writing days, then both declined. Pairwise comparisons indicated that final follow-up was significantly lower than baseline and post-writing days (sigs. $< .001$).

Meaning violation. For belief violations, multivariate tests indicated a significant effect for time, $F(4, 109) = 9.12$, $p < .001$, $\eta_p^2 = .25$, and tests of within-subjects contrasts indicated this effect was order 4 (three directional changes), $F(1) = 6.91$, $p = .010$, $\eta_p^2 = .06$, such that violations increased though post-writing day 2, decreased through post-writing day 3, increased through first follow-up, and decreased in response to the new event at final follow-up for both groups. Pairwise comparisons indicated that score at final follow-up was significantly lower than all previous time points ($ps < .001$).

For goal violations, multivariate tests indicated a significant effect for time, $F(4, 111) = 3.77$, $p = .007$, $\eta_p^2 = .12$, and tests of within-subjects contrasts indicated this effect was linear, $F(1) = 10.73$, $p = .001$, $\eta_p^2 = .09$, such that violations generally decreased over

time for both groups. Pairwise comparisons indicated that scores post-writing day 3 and at follow-ups were significantly lower than baseline ($ps < .025$).

Stress-related growth. For stress-related growth, multivariate tests indicated a significant effect for time, $F(4, 111) = 9.39$, $p < .001$, $\eta_p^2 = .25$, and tests of within-subjects contrasts indicated this effect was quadratic, $F(1) = 10.50$, $p = .002$, $\eta_p^2 = .08$, such that reports of growth stayed fairly constant through first follow-up in relation to the target event but dropped in relation to the new event for both groups. Pairwise comparisons indicated that score at final follow-up was significantly lower than all previous time points ($ps < .001$).

Closure. For closure related to the target event, multivariate tests indicated a significant effect for time, $F(3, 112) = 15.55$, $p < .001$, $\eta_p^2 = .29$, and tests of within-subjects contrasts indicated this effect was quadratic, $F(1) = 22.90$, $p < .001$, $\eta_p^2 = .17$, such that both groups declined through post-writing day 2 and increased through first follow-up. Pairwise comparisons indicated that score at first follow-up was significantly lower than each previous time point (p s $< .001$).

Post-hoc: Correlations of Intervention Dose with Outcome Measures

Because RMANOVAs evinced few significant differences between conditions, continuous dose variables were created to assess the impact of the intervention in the full sample, including participants who received the incomplete struggle intervention. Correlations of the dose and resolution variables described below were conducted with outcomes.

Because each intervention prompt is unique, a continuous dose variable was created to indicate all variations on the intervention received (0 through 7). Higher

scores represent the greatest potentiation and resolution of struggle. Receiving the full

three days of intervention was intended to both potentiate spiritual struggle and

encourage its resolution (in the true dose continuous variable, coded 7). Receiving the

control prompt on day 1 and the struggle resolution and self-distancing prompts and days

2 and 3 was coded 6, followed by days 1 and 2 (coded 5), days 1 and 3 (coded 4), day 2

(coded 3), day 3 (coded 2), day 1 (coded 1), and the true control or zero days (coded 0).

A second continuous variable representing degree of expected resolution,

emphasizing the resolution prompts, was created. The highest spiritual resolution was

expected in the group receiving intervention days 2 and 3 (coded 6), next in the day 2

group (coded 5), followed by days 1 through 3 (coded 4), days 1 and 2 (coded 3), days 1

and 3 (coded 2), day 3 (coded 1), and day 1 (coded 0).

Intervention dose was correlated with greater stress-related growth post-writing

day 2 ($r = .14$, $p = .047$ and at final follow-up ($r = .15$, $p = .048$), and with less stress at

first follow-up ($r = -.19$, $p = .009$. In the sensitivity model, results were identical.

The resolution dose variable was correlated with less anxiety final follow-up ($r = -.22$, $p = .015$) and less depression at both follow-ups ($r = -.19$, $p = .035$; $r = -.18$, $p = .038$, respectively). In the sensitivity model, results were identical.

Post-hoc: Evaluating a Never-Struggled Group on Outcome Measures

It was expected that differences on outcome measures by condition would

partially address the question of whether struggling and resolving adds value over never

having struggled. Because minimal differences by condition were observed, additional

ANOVAs were conducted to compare the participants who endorsed some struggle at

some time point to participants who never endorsed struggle, on outcome measures at

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follow-ups. Dichotomous variables were created to represent never having struggled (sum of 0 on every struggle measure except quest) with the participants who endorsed at least some struggle at one or more time points. Participants who did not endorse struggle were lower on public and private religious practices, positive attitudes toward God, and use of positive religious coping methods than participants who endorsed some struggle.

Participants who endorsed no struggle at baseline ($N = 26$) were lower on mastery at follow-ups ($F(1, 185) = 5.83$, $p = .017$; $F(1, 185) = 4.04$, $p = .046$, respectively) and marginally lower on stress-related growth, $F(1, 185) = 3.84$, $p = .051$, at first follow-up.

Participants who endorsed no struggle at baseline or through end of intervention ($N = 17$) were lower on belief violation at first follow-up, $F(1, 176) = 5.97$, $p = .016$. There were no differences at final follow-up.

Participants who endorsed no struggle at first follow-up ($N = 39$) were lower on discomfort with ambiguity, $F(1, 186) = 7.00$, $p = .033$, and lower on search for meaning, $F(1, 185) = 8.85$, $p = .003$, at final follow-up. This grouping, however, fails to represent *never* having struggled, as it clearly includes some participants who resolved struggle by first follow-up.

Ten participants endorsed no struggle at any time point. They were significantly higher on presence of meaning at first follow-up, $F(1, 187) = 3.96$, $p = .048$. There were no differences at final follow-up.

Growth Curve Analyses

Second-order growth curve models (Preacher, Wichman, MacCallum, & Briggs, 2008) were prepared to evaluate the relations of resolved spiritual struggle, though first follow-up, with outcomes, at first and final follow-ups. Spiritual struggle was

represented by a latent, multi-factorial variable at each time point (comprising the second order), and its change over time was represented by a latent slope variable (comprising the first order).

Separate growth curves for separate constructs of spiritual struggle were considered, to permit measurement of unique trajectories of the sub-constructs. These separate models were attempted but evinced grave errors such that they could not be interpreted, likely because of too few indicators per latent variable, such that slope of struggle could not be modeled as a predictor. Combining struggle measures into a second-order growth model was selected for theoretical and practical reasons. Measuring struggle separately ignores the overlap among the sub-constructs and thus inflates measurement error and reduces power to detect effects. Additionally, using more indicators per latent variable results in better measurement of the construct and a functional model.

To accomplish the second-order growth curve modeling, first, measurement models combining measures of spiritual struggle into latent variables, (a) separately at each time point and (b) combined through first follow-up, were evaluated for fit. Second, a second-order growth curve model using the latent spiritual struggle variables across time was evaluated for fit. Finally, the resulting model was used in analyses predicting outcomes.

In the measurement models and growth curves, the dataset of participants who were not eliminated because of lack of engagement was used ($N = 189$). Model fit was assessed with the comparative fit index (CFI; Bentler, 1990) and the root mean square error of approximation (RMSEA; Hu & Bentler, 1999). Good fit is indicated by CFI

values greater than .95 and RMSEA values less than .05 (Hu & Bentler, 1999; Kline, 2010).

Confirmatory factor analyses of spiritual struggle. First, multiple confirmatory factor analyses were conducted to determine the best-fitting measurement model for spiritual struggle at each time point. Because quest failed to correlate consistently with, and it is conceptually distinct from, the other measures of struggle, quest was not included in these models. Models were prepared combining three of most-closely-correlated measures into an overall struggle factor (i.e., negative attitudes toward God, spiritual discontent coping, and punishing God reappraisal coping), combining four measures (adding reappraisal of God's powers coping), and combining five measures (adding social struggle). Additionally, each model was evaluated using three (i.e., baseline, post-writing day 3, and first follow-up) and four (adding post-writing day 2) time points.

Superior fit was achieved by combining the four measures of spiritual struggle at three time points, and within that model by correlating errors of the same measures across time points, $\chi^2(42, N = 189) = 82.33$, $p < .001$, CFI = .97, RMSEA = .07 [$CI = .05$-$.09$]. Correlating errors of the same measures across time is a fairly standard procedure to achieve acceptable model fit.

Achieving acceptable fit in the growth curve model. A second-order latent growth curve model was created with latent variables representing the intercept and slope of struggle, and with four latent variables representing struggle at three points. So that the struggle construct represented in these models would be internally consistent across time, each of the four indicator variable loadings on the struggle latent variable (i.e., a, b,

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c, d) and the error variances for the indicators (i.e., v1, v2, v3, v4) were fixed to be the same across each time point, to ensure that the relative contribution of each struggle indicator was the same across time (Kenny, 2011a). Additionally, the means of the indicators for struggle were set to be zero, in accordance with single-order growth models, in which the mean of the indicators are zero.

The slope parameters were fixed to represent linear growth (Kaplan, 2008) in months. The actual slopes may not be perfectly linear; if so, the true slopes would dampen the effect modeled by a linear slope, resulting in a relatively conservative analysis. Models were tested using first follow-up as the intercept (i.e., slope parameters represented by 0 months at first follow up, -1 month at post-writing day 3, -1.033 months at post-writing day 2, and -1.067 months at baseline) and using baseline as the intercept (i.e., slope parameters represented by 0 months at baseline, .033 months at post-writing day 2, .067 months at post-writing day 3, and 1.067 months at first follow-up). Model fit is not altered appreciably by adjusting the slope parameters, but slope parameters alter the mean and variance of the intercept and the slope-intercept covariance (Kenny, 2011a). Model fits were comparable modeling time forward or backward; modeling forward was selected for ease of interpretation.

Modeling slope forward in time in months, using four struggle measures at three time points evinced acceptable model fit, $\chi^2(64, N = 189) = 247.43, p < .001$, CFI = .88, RMSEA = .12 [CI=.11-.14]. Because the error variance of the disturbance variable for struggle at first follow-up was negative, it was fixed to zero, per standard procedure (Kenny, 2011b). This model showed that the intercept for struggle was significantly different from 0, $M = .93$ ($SE = .10$), $p < .001$. The slope for struggle was significantly

different from 0, $M = -.22$ ($SE = .06$), $p < .001$, and the negative value indicates decline in struggle over time. This is consistent with the pattern of results evinced by paired t-tests and RMANOVAs described above (i.e., declining struggle over time). There was significant variance in the struggle intercept. $D = 1.16$, ($SE = .20$), $p < .001$, and slope, $D = .36$, ($SE = .08$), $p < .001$, indicating these variables can be used to predict outcomes. The intercept-slope covariance was negative (-.31, $p < .001$), indicating that the higher the baseline level of struggle (intercept), the smaller the rate of change (slope).

Using the struggle growth curve model to predict outcomes. Struggle slope and intercept were used as predictors of outcomes in separate models[2].

Slope. The slope of struggle through first follow-up negatively predicted struggle at final follow-up, $\beta = -1.00$, $p = .043$, indicating that reductions in struggle through the first follow-up were followed by continued reductions through the final follow-up. This model is depicted in Figure 1. Struggle slope positively predicted greater presence of meaning at final follow-up, $\beta = .21$, $p = .018$, indicating reductions in struggle through first follow-up predicted greater presence of sense of meaning at final follow-up. This model is depicted in Figure 2. Estimates using the sensitivity model were identical.

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[2] There were no significant gender differences on levels of spiritual struggle at any time point. Women scored higher than men on positive attitudes toward God and seeking spiritual support coping at all time points, benevolent religious reappraisal coping and belief violation at first follow-up and goal violation and stress-related growth at final follow-up. They scored lower on mastery at baseline, higher on discomfort with ambiguity at final follow-up, and higher on stress at baseline and final follow-up. Growth curves using the 143 women remained comparable in terms of fit and predicted few outcomes. However, the prediction of spiritual struggle at final follow-up was reversed, such that women had *greater* struggle at final follow-up ($\beta = 1.00$, $p = .002$), but the model fit was poor, $\chi^2(37, N = 115) = 490.56$, $p < .001$, CFI = .76, RMSEA = .15 [CI=.14-.16]. Struggle slope also predicted higher PTSD symptoms at the final follow-up, at the trend level, $\beta = .16$, $p = .099$. Notably, RMANOVAs on these outcomes with the women-only subsample evinced the same pattern of effects described for the whole sample.

Struggle slope did not significantly predict discomfort with ambiguity (p = .251), mastery (p = .617), presence of meaning (p = .373), search for meaning (p = .389), stress (p = .932), anxiety (p = .316), nor depression symptoms (p = .966) at first follow-up. It did not predict target event-related closure (p = .306), PTSD symptoms (p = .163), benevolent religious reappraisal coping (p = .417), seeking spiritual support coping (p = .181), belief violation (p = .637), goal violation (p = .508), stress-related growth (p = .379) or event-related distress (p = .891) at first follow-up

Struggle slope did not predict discomfort with ambiguity (p = .662), mastery (p = .529), search for meaning (p = .776), stress (p = .722), anxiety (p = .455), or depression symptoms (p = .686) at final follow-up. It did not predict PTSD symptoms (p = .355), benevolent religious reappraisal coping (p = .131), seeking spiritual support coping (p = .155), belief violations (p = .305), goal violations (p = .970), stress-related growth (p = .448), or event-related distress (p = .214) in response to the new event at final follow-up.

Intercept. A higher struggle intercept (i.e., higher struggle scores at baseline) predicted less event-related closure at first follow-up, β = -.16, p = .046, and higher struggle scores, β = 1.00, p < .001, and PTSD symptoms, β = .16, p = .038, at final follow-up. It also marginally predicted lower presence of meaning, β = -.15, p = .060, and higher anxiety, β = .07, p = .085, at final follow-up.

A higher struggle intercept did not predict discomfort with ambiguity (p = .297), mastery (p = .356), search for meaning (p = .815), stress (p = .348), anxiety (p = .455), or depression symptoms (p = .100) at final follow-up. It did not predict benevolent religious reappraisal coping (p = .565), seeking spiritual support coping (p = .579), belief

violations ($p = .780$), goal violations ($p = .310$), stress-related growth ($p = .828$), or event-related distress ($p = .152$) in response to the new event at final follow-up.

To evaluate whether modeling lack of change in struggle would impact outcomes, the same analyses were run while fixing the slope mean to equal 0. Setting slope equal to 0 (i.e., restricting change in struggle), produced similar effects for intercept as a predictor. A higher struggle intercept (i.e., higher struggle scores at baseline) predicted less event-related closure at first follow-up, $\beta = -.16$, $p = .045$, and higher struggle scores, $\beta = 1.00$, $p < .001$, and PTSD symptoms, $\beta = .16$, $p = .037$, at final follow-up. It marginally predicted lower presence of meaning, $\beta = -.175$, $p = .058$, and higher anxiety, $\beta = .07$, $p = .082$, at final follow-up.

Setting slope equal to 0, a higher struggle intercept did not predict discomfort with ambiguity ($p = .295$), mastery ($p = .357$), search for meaning ($p = .693$), stress ($p = .347$), or depression symptoms ($p = .100$) at final follow-up. It did not predict benevolent religious reappraisal coping ($p = .573$), seeking spiritual support coping ($p = .584$), belief violations ($p = .781$), goal violations ($p = .306$), stress-related growth ($p = .831$), or event-related distress ($p = .149$) in response to the new event at final follow-up.

Predicting struggle slope with condition. The true condition variable ($N = 117$, 56 in the struggle condition and 61 in the control condition) did not predict the slope of struggle ($p = .199$), which is consistent with RMANOVA results reported above regarding no differences in struggle by condition.

Post-hoc: Predicting struggle slope with dose. Neither the continuous dose nor continuous resolution variables predicted struggle slope ($p = .170$, $p = .911$, respectively).

Discussion

The present study was designed to evaluate the course and consequences of resolving spiritual struggles. The pattern of change in response to a struggle induction and resolution intervention was compared to the relatively natural course of struggle in response to neutral writing prompts. To acknowledge the uniqueness of sub-constructs while comprehensively assessing the construct as a whole, multiple measures of spiritual struggle were analyzed separately and together as a latent change variable. Results were generally consistent with hypotheses that struggling would relate to distress, that struggling would resolve over time, and that resolution of struggle would relate to positive outcomes.

Hypothesis 1

Consistent with the first hypothesis, most measures of spiritual struggle were cross-sectionally correlated with some negative concurrent outcomes. As predicted, all measures of struggle, except for quest, correlated with having more PTSD symptoms associated with the target event at all time points and with the new event at final follow-up. Greater depressive symptoms were associated with reappraisal of God's powers coping at baseline and with quest at final follow-up.

Notably, spiritual struggle that was present at final follow-up was more strongly and consistently related to negative outcomes, including distress and meaning violation. The final follow-up occurred during the end of the semester, so finals-related stress likely contributed to students' overall distress. However, reported stress and meaning violations dropped overall, although there was no change over time in anxiety or depression symptoms. It is possible that struggle and stressors specific to the end of the semester interacted to exacerbate general distress.

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Although it is unknown whether the individuals reporting relatively high levels of struggle at final follow-up were continuously doing so, it may be that the struggle present at follow-up reflects chronic struggle, which is likely to relate to negative outcomes (Pargament et al., 2004). Students participated in a semester-long study entitled Resolving Spiritual Struggles; if endorsers of struggle at final follow-up continued to report struggle and thus failed to resolve, distress would be understandably high.

Also consistent with the first hypothesis, meaning violations were correlated with spiritual discontent coping at baseline; with quest at first follow-up; and with each of the negative religious coping methods at final follow-up. Less presence of meaning was associated with negative attitudes toward God at follow-ups and with punishing God reappraisal coping at final follow-up.

Unexpectedly, quest was associated with less comfort with ambiguity at baseline (cf., Burris et al., 1996) and with less mastery at final follow-up. Quest was also consistently related to greater search for meaning. This was partially consistent with past studies in which quest was related to lower sense of meaning in college students (Klassen & McDonald, 2002).

Additional notable correlations included the association of reports of more stress-related growth with reappraisal of God's powers coping at first follow-up and with all measures of negative religious coping at final follow-up. The negative religious coping methods were also consistently positively correlated with the positive religious coping methods. In contrast, negative attitudes toward God did not correlate with positive attitudes or positive religious coping methods. These results support the stress mobilization hypothesis, that multiple coping resources are engaged to cope with a

stressor (Pargament, 1997) and somewhat support the interpretation of self-reported stress related growth as a reappraisal coping strategy (Frazier, Tennen et al., 2009). Combined with results regarding change over time, which indicated that negative and positive religious coping strategies and reports of stress-related growth decreased, it may be that the fewer individuals who were continuing to struggle spiritually at follow-up were attempting to use all resources at their disposal to come to terms with their stressors.

Hypothesis 2

Consistent with the second hypotheses, the manipulation check results indicated that the struggle-related intervention had the intended effect of inducing greater negative attitudes toward God compared to the control condition. Although the predicted resolution-inducing (day 2) and self-distancing (day 3) prompts individually did not result in lower negative attitudes toward God scores compared to the struggle-induction (day 1) prompt, the negative attitude scores were lower by post-writing day 3 compared to baseline. The intervention did not, however, induce greater negative affect than the control prompts. That the intervention increased negative attitudes toward God but not negative affect generally supports the specificity of the intervention.

The pattern of change in event-related closure supports the notion of the writing process "opening up" the event, that is, causing participants to think about the event, and then permitting them to "close" the event over time. That the control group also experienced this pattern suggests that the act of responding to questionnaires about the target event itself, and knowingly participating in a study entitled, Resolving Spiritual Struggles, may have prompted this event-related processing to occur (an expectancy effect, discussed in Limitations).

Hypothesis 3

Consistent with the third hypothesis, results indicated a reduction in spiritual struggle over time overall. The pattern of change evinced a drop in most measures of struggle as well as an increase in event-related closure. As predicted, quest remained relatively stable over time.

The pattern of change in individual variables is worthy of note. The use of reappraisal of God's powers coping peaked then dropped, whereas other negative religious coping methods dropped in a relatively linear fashion. It may be that this particular coping strategy reflects a new way of perceiving God's role in the world, triggered by processing the negative event. Engaging in reappraisal of God's powers may constitute an alteration in global meaning, which may be a one-time experience that is not continuously employed. In fact, reappraisal of God's powers coping was consistently related to search for meaning, as was quest. Cross-sectional correlations did not indicate whether early use of reappraisal of God's powers coping was related to later presence of meaning; however, change analyses (see discussion of Hypothesis 4 below) for the latent struggle construct indicate resolution of struggle generally related to greater meaning.

In general, because the coping strategies are anchored to the event itself, it is likely that as time since event increased, active coping strategies would be used less frequently. However, it is notable that the use of these negative religious coping strategies did not spike in response to the new event experienced between follow-ups, suggesting a more resilient response to the new stressor (see discussion of Hypothesis 4 below).

In contrast to the steady pattern of quest and the reduction in negative religious coping, negative attitudes toward God and social struggle dropped and then rebounded. This pattern suggests that writing about spiritual struggles with an event (in the case of the struggle intervention group) and simply participating in a research study about spiritual struggles (i.e., responding to questionnaires) can temporarily reduce reports of negative attitudes toward God and religious social struggles. These feelings became less intense during the writing; however, it may be that these attitudes and experiences are more stable and susceptible to being re-kindled. Indeed, reducing anger at God and a community of faith may involve altering a worldview, and Chickering noted the difficulty of sustaining such worldview change in his early research on undergraduates: "A more flexible enlightened conscience or humanized value system is difficult to achieve and sustain" (Chickering, 1969, p. 127).

Notably, the presence and pattern of social struggle, which reflects unhappiness with faith leadership and the community of faith, may also be influenced by other variables not measured in this study, such as poor interpersonal skills or personality pathology. Additionally, the measure contains an item referring to "bad memories" of religion or religious people, which may not be amenable to change, or unlikely to simply disappear over ten weeks, even if the negative valence associated with the memories decreases.

Contrary to Hypothesis 3, the struggle condition did not result in greater reduction in spiritual struggle over time compared to the control condition. There were minimal intervention group differences and none indicating a change in the intervention group that was not present in the control group. The change in social struggle was steeper for the

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struggle group, indicating participants receiving the intervention dropped more during the intervention but also rebounded more in follow-ups. Notably, direction of change in private religious practices was different for the two groups, such that the struggle intervention group increased in private practices between follow-ups, whereas the control group dropped. It cannot be concluded that the struggle intervention *caused* this increase in private religious practices; however, given that there were no baseline differences between groups on that measure or other measures of religiousness or spirituality, it can be inferred that the intervention may have been influential.

Because of the limited group differences found between the conditions, post-hoc correlations were conducted with linear dose variables to include the full sample, including the participants in Wave 2 who received the partial struggle intervention. In these post-hoc analyses, intervention dose related to greater stress-related growth and to less stress. Resolution dose related to less anxiety and depression. These correlations suggest that the process of writing about spiritual struggles may be beneficial in terms of more perceived stress-related growth and reduced stress, anxiety, and depression symptoms. Differences by condition may have emerged with a larger sample receiving the true conditions. The slight difference between the intervention dose and resolution dose variables also suggests modifications to the intervention itself: that prompting active processing of a higher power's role in events may be insufficient to bring about resolution; rather, prompts to resolve may be necessary.

The struggle intervention's failure to produce differences in outcomes may be impacted by individual differences in participants that were not measured in this study. For example, alexithymia may impact the experience of writing paradigms, such that the

act of writing, accompanied perhaps by low self-efficacy regarding expressing one's feelings, may cause distress related to the task itself instead of targeting deep thoughts and feelings about the target event (Horneffer & Chan, 2009).

Hypothesis 4

Results were somewhat consistent with the hypothesis that resolved spiritual struggle would relate to positive outcomes, in terms of personal resources (meaning, mastery, tolerance for ambiguity, growth) and resilient outcome to future stressors (minimal distress and meaning violation and low levels of struggle). Growth curves indicated that resolving spiritual struggle, in terms of a decline (negative slope) through first follow-up, was largely unrelated to outcomes, in that the majority of relationships were non-significant. Additionally, the good model fit for the spiritual struggle construct degraded somewhat when the latent growth curve of struggle was modeled. Resolving spiritual struggle did, however, predict lower levels of struggle as well as greater presence of meaning at final follow-up. This finding is a novel one in the literature, complementing the knowledge that chronic struggling is harmful (Pargament et al., 2004).

Pargament and colleagues (2004) showed that chronic struggling compared to never struggling was related to worse outcomes at follow-up. These findings suggest that transitory struggling is not as damaging as chronic struggling, but they do not address the question of whether resolved spiritual struggle is related to any positive outcomes (as opposed to unrelated to negative outcomes). Additionally, it is unknown whether resolving spiritual struggle has any benefits beyond never having struggled.

The latent growth curve results in the present study provide information about resolution beyond measurement of the presence or absence of struggle at a particular time point. The latent slope of struggle represents the dynamic tendency of struggle reducing from baseline to follow-up. It is this resolution of struggle that was used to predict outcomes at the final follow-up. Whereas cross-sectional correlations indicated that negative attitudes toward God at final follow-up related to *less* presence of meaning, the growth curve presents a fuller picture: that *reduction* in struggle in fact related to *greater* presence of meaning at final follow-up.

However, resolution of struggle did not predict other personal resources beyond presence of meaning, nor resilient response to the subsequent stressor beyond lower levels of struggle (in response to the stressor, insofar as the coping methods were anchored to the stressor). Resolution of struggle may have related to positive coping methods had a latent positive coping variable (i.e., more indicators and more variance to predict) been used as the outcome and thus improved measurement and increased power to detect effects. Other predictors of post-traumatic symptomatology and post-traumatic growth were not measured and could not be included as controls in models, including a better measure of social support (Abeles et al., 1999; Bryant & Astin, 2008; Pargament et al., 2006).

Finally, resolution of spiritual struggle predicted *greater* struggle at final follow-up for women, even though the pattern of change for the individual measures was the same for the women as for the entire sample. These results must be interpreted with caution, as model fit predicting struggle for women only degraded substantially. Resolution also predicted higher PTSD symptoms at final follow-up (with the same

acceptable model fit as with the entire sample), and PTSD symptoms and struggle were strongly correlated at final follow-up. Struggle and PTSD symptoms have been closely intertwined in other samples of women (e.g., Bradley et al., 2005; Fallot & Heckman, 2005). However, why greater resolution predicted a greater rebound in struggle, specifically in negative attitudes toward God, for women is surprising. It may be that the struggle reduction reported at first follow-up, for some, was not a reflection of genuine *resolution* such that negative attitudes toward God were eliminated. Notably, reduction in struggle was not associated with event-related closure at first follow-up, neither for women nor for the entire sample, which supports notion that reduction in struggle did not equate to event-related resolution[3].

Is it better to Struggle and Resolve than to never Struggle at All?

Analyses involving the *slope* of struggle indicated that resolution is beneficial in terms of greater sense of meaning and lower levels of struggle overall at final follow-up, regardless of the participants' starting point on measures of struggle (i.e., baseline struggle or *intercept*). The intercept-slope covariance was negative (-.31, $p < .001$), indicating that the higher the baseline level of struggle (intercept), the smaller the rate of change (slope). This result could be interpreted to mean that struggling on one's own (i.e., entering the study endorsing struggle) is less beneficial than entering the study with

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[3] It may be that event-related characteristics explain the different trajectory for women. Women rated the new event at final follow-up as more distressing than men, but not significantly (M = 47 versus 41/100, t(161) = 1.17, p = .245). Women's distress rating of the follow-up event was also significantly lower than their baseline target event distress rating (M = 59 versus 47, t(125) = 4.10, p < .001). These results indicate that it is not event-related characteristics that explain the gender differences in rebounding of struggle. Life event history was considered as another possible explanation; however, there were no gender differences on endorsement of CAPS stressors at follow-ups, and men were *more* likely to endorse a CAPS event at baseline

lower levels of struggle, because the reduction in struggle is less. It may also be that

higher baseline levels of struggle reflect a phenomenon that is less conducive to change

or resolution, a more stable characteristic.

An investigation of the effects of intercept on outcomes revealed that higher

baseline levels of struggle predicted the presence of negative outcomes and lower levels

of positive outcomes at follow-ups. Running the same analyses while setting slope to 0,

that is, restricting change in struggle, permitted investigation of the effects of baseline

levels of struggle on outcomes under conditions of no change, which mimics the chronic

struggle condition evaluated by Pargament et al. (2004). Essentially identical results

emerged when restricting change. Higher baseline levels of struggle predicted less event-

related closure at first follow-up and more struggle at final follow-up. Additionally, at

the trend level, higher baseline levels of struggle predicted more anxiety and less

presence of meaning at final follow-up. These results differ from Pargament et al.

(2004), in which transitory struggling did not predict negative outcomes at follow up.

Post-hoc analyses compared the small group of individuals who never endorsed

struggle throughout the study to the remainder of the sample. The never-struggled group

of ten individuals scored higher on presence of meaning in life at the first follow-up.

Combined with the findings that resolution of spiritual struggle predicts presence of

meaning at final follow-up, these findings suggest that struggling is not necessary to

achieve presence of meaning. This finding echoes the curvilinear trend found by Klassen

and McDonald (2002) such that low and high levels of quest were related to greater sense

of meaning. Perhaps struggling and resolving is not superior to never having struggled.

Limitations

Although undergraduates are an effective population in which to study spiritual struggles (e.g., Bryant & Astin, 2008; J.J. Exline, personal communication, October 19, 2010), the present study was limited to young adults and could not capture the experience of older people facing struggles that may be more prevalent in later stages of life. Notably, however, a fairly wide range of stressors was endorsed in this young sample, including not only serious academic and athletic matters but also assault, serious illness, and bereavement.

Even among undergraduates, the present sample was limited in diversity, being primarily White women. Despite the relative homogeneity of age of the sample, age differences may be present in openness to, level of engagement in, and tolerance of spiritual struggle. For instance, research from the 1960s indicated "that juniors and seniors, when compared to freshmen and sophomores, experienced deeper conflicts between reasoned agnosticism and faith, experienced more unsatisfied longing for faith, and were more inconsistent in behavior and belief" (Havens, 1964, cited in Chickering, 1969, p. 127).

Additionally, this study may have suffered from self-selection bias. Students chose whether or not they would participate in a study entitled Resolving Spiritual Struggles, which may have increased participation of students with an interest in spiritual topics. Interestingly, several students responded to struggle intervention prompts stating that they did not believe God was involved in their event. One wrote that he did not believe in God and did not elaborate (his responses did not otherwise indicate non-engagement in the study; therefore, his responses were included in analyses). Another individual wrote about having conflicting feelings about God but endorsed no struggle

measures. Although the struggle measures were highly positively skewed, a fairly

diverse set of experiences with spiritual struggle seems to have been tapped in this study.

The writing transcripts testify to the diversity of experience of struggle. For

example, a person who felt sorry for "straying from the path" did not endorse any anger

toward God or perceptions of punishment; however, she did endorse fear of religious

people's condemnation. It may be that yet another measurement of struggle could be

considered in the form of low scores on items such as "trust God to protect and care for

you." Anecdotally, such items appeared to be endorsed in lower levels by individuals

who wrote about an interpersonal stressor, such as a parental affair or divorce.

There were no differences in event-related distress by event type in the present

analyses; however, categorizing events in a different way may have uncovered additional

relationships. For instance, Ayduk and Kross (2008) suggest that stressors should be

differentiated based on whether they are interpersonal, in the past versus involving worry

about the future, and whether the event activates anger or sadness.

There were variable levels of engagement in the writing intervention. Clearly

some participants spent more time writing and thought more carefully about the prompts

than others. Students who obviously failed to take the survey seriously (e.g., wrote only

two lines, spent less than ten minutes, or answered the same way for all the measures)

were omitted from analyses.

Some students had difficulty following the directions of the third struggle

induction/resolution prompt, which asked them to step back and observe the event from a

distance. Several, particularly those that had received the control prompts the previous

two days, which required them to objectively write about how they spend their time,

simply recounted the event, without achieving apparent distance. The error in administration during Wave 2, which allowed half of the participants to receive the incorrect writing prompts, may have contributed to additional inconsistencies in the data.

Spiritual Struggle and Relationship

Some interpretations of struggle assume alienation from God. The spiritual struggle that relates to increased mortality risk (Pargament, Koenig et al., 2001) is clearly different from the "struggle" Stephen Jay Gould referred to in *The Median isn't the Message*:

> But match people with the same cancer for age, class, health, socioeconomic status, and, in general, those with positive attitudes, with a strong will and purpose for living, *with commitment to struggle*, with an active response to aiding their own treatment and not just a passive acceptance of anything doctors say, tend to live longer. (Gould, 2002 para. 7, emphasis added).

To struggle is not inherently damaging; as Gould reflects; rather, it is central to living. In contrast, some spiritual struggle reflects alienation from as opposed to engagement with life-giving resources.

In developmental psychology, the importance of the distinction between processes of alienation and self-transcendence has been noted (Levenson, Jennings, Aldwin, & Shiraishi, 2005). Certain religious traditions, such as contemplative Christianity, embrace the expectation of struggle and do not reflect the alienation from God represented in many of the struggle measures. Redefining struggle as normative and potentially positive (i.e., redemptive) may be very effective in bringing about resolution.

Exline has defined "emotional atheism" as disbelief in God while retaining anger towards God (Exline & Rose, 2005). In fact, anger at God and doubt in God's existence have been positively correlated (Exline, 2009). This juxtaposition may not be inherently negative. The integration of faith and doubt is expressed by poet Christian Wiman:

Doubt is so woven in with what I think of as faith that it can't be separated. I am convinced that the same God that might call me to sing of God at one time might call me at another to sing of godlessness. And that sometimes when I think of all of this energy that's going in, all of this what we've talked about, these different people trying to find some way of naming and sharing their belief, I think it may be the case that God calls some people to unbelief in order that faith can take new forms. (2012).

Spiritual struggle may take place in the framework of an intact relationship with a higher power, assuming the individual's personal and social supports are intact. Given these supports, they may appraise their struggle as a challenge, instead of a threat, and thus an opportunity for personal growth. Clinicians may explore the client's growth in session, if the client wishes to discuss it in the context of psychotherapy, or the client may choose to address spiritual issues in their spiritual community. If personal struggle involves venting to a higher power or expressing concerns about a religious institution in the context of a secure relationship or community, it may be more likely to resolve and relate to positive outcomes (Park & Halifax, 2011).

Conclusions

That struggle tends to drop over time, regardless of intervention, indicates it may have a naturally declining course, in response to a need to make meaning or reduce cognitive dissonance (Park, 2010), although this course may depend on the sub-construct of struggle being evaluated (e.g., Exline & Martin, 2005; cf., Hunsberger et al., 2002). As mentioned above, the change in the control group also could be attributed in part to expectancy effects, since the study was titled Resolving Spiritual Struggles and involved struggle-related questionnaires and identification of an open, negative event that could have led to cognitive and emotional processing outside of the study. Additionally, the active use of coping strategies is likely to decline through first follow-up as time since event increases.

Despite these limitations of the study, it is useful to observe that, with cues to work on spiritual struggles, people tend to work toward resolution. Furthermore, that resolution appears to be related to a resilient response to future stressors, in terms of less negative religious coping responses, and to greater presence of meaning in life. At the same time, it cannot be concluded from these results that struggling and resolving is superior to never having struggled at all. Future research should address questions of what individuals or groups require assistance with this process of resolution, and what variables predict whether struggling will be chronic or will resolve. Investigation of writing transcripts themselves and evaluation of the nature of writing (i.e., did the participant address their writing to God?) and the vividness of the writing (e.g., King, Scollon, Ramsey, & Williams, 2000) may illuminate some of these nuances.

Table 1

Correlations among Measures of Spiritual Struggle and with Study Variables at Baseline

Measure	*1*	*2*	*3*	*4*	*5*	*6*	*M*	*SD*
1. Negative attitudes toward God	-						5.35	8.25
2. Social struggle	.39**	-					6.14	6.76
3. Quest	.12†	.26**	-				55.14	17.32
4. Spiritual discontent coping	.50**	.28**	.19*	-			1.20	2.05
5. Punishing God reappraisal coping	.38**	.35**	.19*	.68**	-		1.11	1.83
6. Reappraisal of God's powers coping	.36**	.26**	.30**	.55**	.42**	-	2.00	2.13
7. Public religious practices	.04	.09	-.02	.16*	.27**	.16*	2.31	2.34
8. Private religious practices	.02	.17*	-.02	.24**	.37**	.24**	3.90	4.31
9. Positive attitudes toward God	-.02	.05	.04	.09	.15*	.10	24.61	18.44
10. Discomfort with ambiguity	.07	.01	.17*	.07	.11	.01	38.89	6.70
11. Mastery	.06	-.03	-.03	-.12	.-25**	-.01	26.72	3.96
12. Presence of meaning	-.09	-.06	-.10	-.08	-.09	-.10	23.95	6.16
13. Search for meaning	-.03	.02	.18*	.09	.17*	.15*	25.14	5.98
14. Stress	-.02	.08	.13†	.05	.12	.15*	6.74	4.30
15. Anxiety	.01	.04	.07	.11	.15*	.11	3.61	3.46
16. Depression	.07	.08	.13†	.12	.21**	.21**	4.01	3.99

17. PTSD symptoms	.15†	.18*	.05	.25**	.23**	.15*	32.29	11.58
18. Benevolent religious reappraisal coping	.03	.14†	.03	.27**	.31**	.21**	2.78	2.77
19. Seeking spiritual support coping	.02	.08	-.01	.22**	.24**	.11	3.12	3.16
20. Belief violation	.08	.02	.12†	.17*	.03	.14†	11.35	3.33
21. Goal violation	.06	.11	.13†	.20**	.19*	.14†	22.21	8.90
22. Stress-related growth	-.05	-.01	.09	-.01	.02	.07	16.34	8.40
23. Closure	-.03	-.03	-.15*	-.08	-.06	-.06	19.94	11.05

$** p < .01, * p < .05, † p < .10$

Table 2

Correlations among Measures of Spiritual Struggle and with Study Variables at First Follow-up

Measure	1	2	3	4	5	6	M	SD
1. Negative attitudes toward God	-						4.18	7.20
2. Social struggle	.37**	-					4.88	6.58
3. Quest	.16*	.26**	-				53.51	18.66
4. Spiritual discontent coping	.57**	.22**	.19**	-			1.20	2.05
5. Punishing God reappraisal coping	.37**	.23**	.07	.67**	-		0.73	1.50
6. Reappraisal of God's powers coping	.31**	.24**	.32**	.56**	.43**	-	1.66	1.98
7. Public religious practices	.06	-.04	-.06	.07	.11	.11	2.20	2.46
8. Private religious practices	.00	.10	.04	.15*	.25**	.13†	3.94	4.46
9. Positive attitudes toward God	-.05	.03	-.03	.03	.12	.17*	22.71	18.51
10. Discomfort with ambiguity	.01	.07	.14†	.03	-.01	.12	36.72	8.57
11. Mastery	-.12	-.08	.12†	-.01	-.20**	.04	25.75	4.27
12. Presence of meaning	-.20**	-.10	-.11	-.09	-.09	-.04	22.25	6.67
13. Search for meaning	-.16*	.08	.22**	-.05	.05	.19*	23.63	7.05
14. Stress	.06	.26**	.09	.15*	.15*	.11	5.15	4.36
15. Anxiety	.18*	.32**	-.03	.17*	.22**	.09	2.87	3.62

16. Depression	.13†	.32**	.05	.20**	.25**	.09	3.71	4.11
17. PTSD symptoms	.16*	.31**	.00	.33**	.34**	.27**	26.71	10.44
18. Benevolent religious reappraisal coping	-.02	.17*	-.01	.15*	.23**	.28**	2.65	2.94
19. Seeking spiritual support coping	.00	-.01	-.05	.19*	.30**	.29**	2.75	3.13
20. Belief violation	.16	.29**	.25**	.29**	.21**	.33**	11.22	3.76
21. Goal violation	.09	.25**	.04	.24**	.21**	.11	19.81	7.97
22. Stress-related growth	.00	.09	.10	.05	.04	.16*	15.06	8.98
23. Closure	-.11	-.15*	-.07	-.11	-.07	-.07	24.10	11.49

$** p < .01, * p < .05, † p < .10$

Table 3

Correlations among Measures of Spiritual Struggle and with Study Variables at Final Follow-up

Measure	1	2	3	4	5	6	M	SD
1. Negative attitudes toward God	-						4.82	7.57
2. Social struggle	.43**	-					5.54	7.10
3. Quest	.15*	26**	-				54.03	18.83
4. Spiritual discontent coping	.43**	.20**	.12†	-			0.47	1.10
5. Punishing God reappraisal coping	.33**	.13†	.03	.73**	-		0.48	1.21
6. Reappraisal of God's powers coping	.34**	24**	.24**	.55**	.47**	-	1.14	1.80
7. Public religious practices	.01	-.03	-.04	.12	.04	.04	2.07	2.37
8. Private religious practices	-.06	.01	.02	.08	.03	-.01	3.86	4.12
9. Positive attitudes toward God	.05	.05	.02	.10	.13†	.09	22.24	18.35
10. Discomfort with ambiguity	.01	.03	.08	-.03	.06	.14†	37.27	8.11
11. Mastery	-.26**	-.18*	-.16*	-.29**	-.37**	-.11	25.91	4.70
12. Presence of meaning	-.20**	-.05	-.05	-.08	-.15*	-.04	22.20	6.39
13. Search for meaning	-.13†	.03	.27**	-.01	.03	.16*	23.42	6.78
14. Stress	.22**	.26**	.15*	.26**	.32**	.30**	5.62	4.75
15. Anxiety	.34**	.27**	.11	.29**	.36**	.28**	3.46	4.28

16. Depression	.26**	.27**	.18*	.31**	.38**	.25**	4.35	4.82
17. PTSD symptoms	.18*	.15*	.08	.36**	.44**	.36**	29.75	13.15
18. Benevolent religious reappraisal coping	-.08	.05	.00	.20**	.28**	.19**	2.13	2.85
19. Seeking spiritual support coping	.01	.03	-.04	.22**	.27**	.18*	2.73	3.07
20. Belief violation	.10	.12	.02	.26**	.24**	.30**	9.37	3.54
21. Goal violation	.15*	.13†	.09	.32**	.34**	.21**	19.16	7.95
22. Stress-related growth	.01	-.01	.12	.19*	.17*	.33**	11.19	8.86

$** p < .01, * p < .05, † p < .10$

Table 4

Categories of Target Events at Baseline with Mean Distress and Time since Occurrence

| Category	Number of participants endorsing	Mean current distress rating (*SD*)	Mean months since occurrence (*SD*)
Bereavement	54	58.17 (21.89)	41.87 (44.06)
Relationship loss	35	56.54 (27.76)	22.09 (33.66)
Relationship stress	32	62.09 (22.00)	21.94 (37.56)
Family or friend illness	20	64.20 (19.28)	33.50 (44.94)
Educational or athletic problem	15	70.13 (27.16)	11.33 (10.12)
Sexual assault or attempted	9	59.67 (19.16)	35.44 (42.31)
Mental illness	8	65.00 (25.26)	12.50 (21.51)
Witnessed or experienced violence or accident	7	61.43 (15.39)	41.14 (43.29)
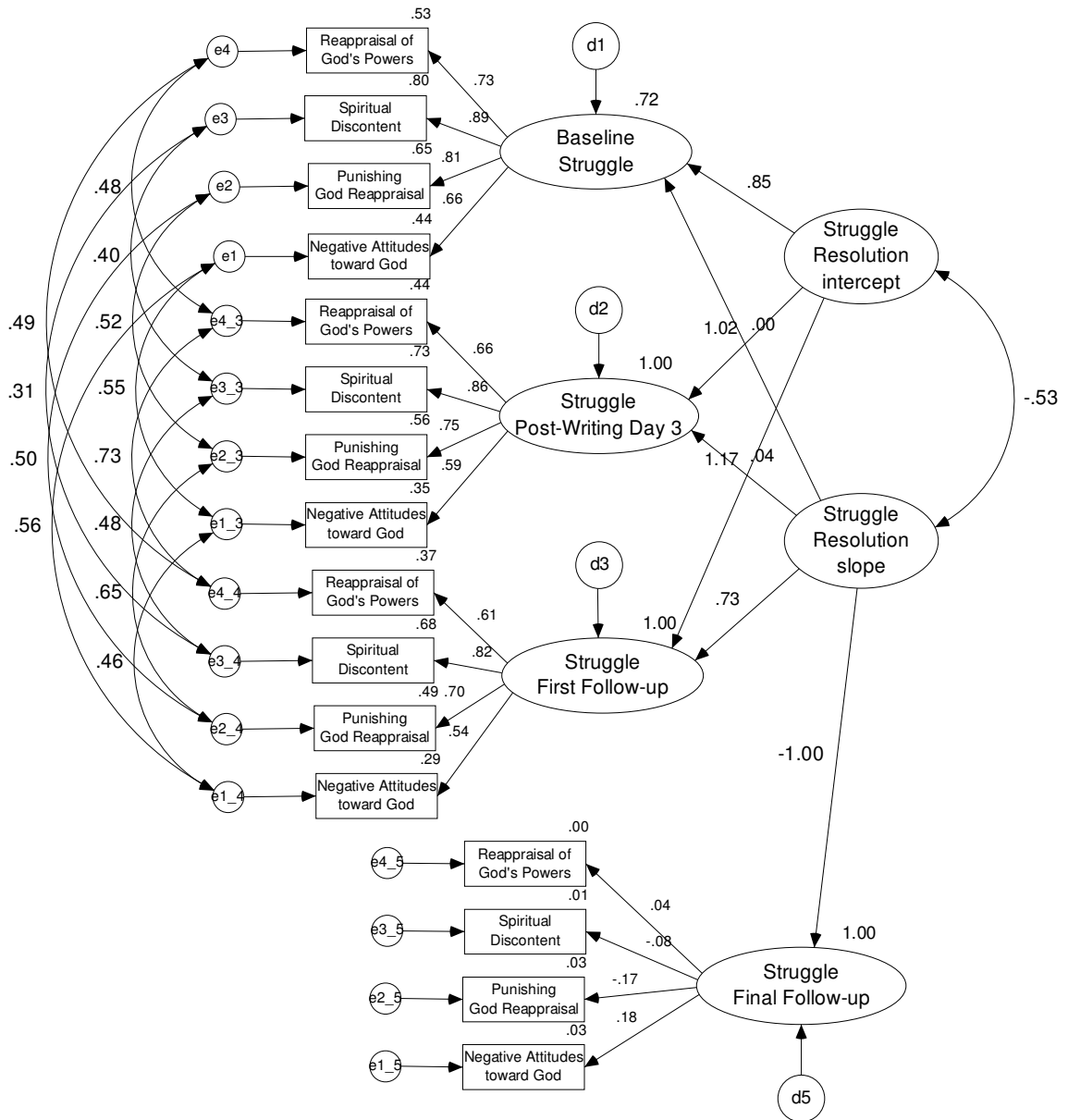
Figure 1. Latent growth curve depicting spiritual struggle resolution through first follow-up predicting spiritual struggle at final follow-up.
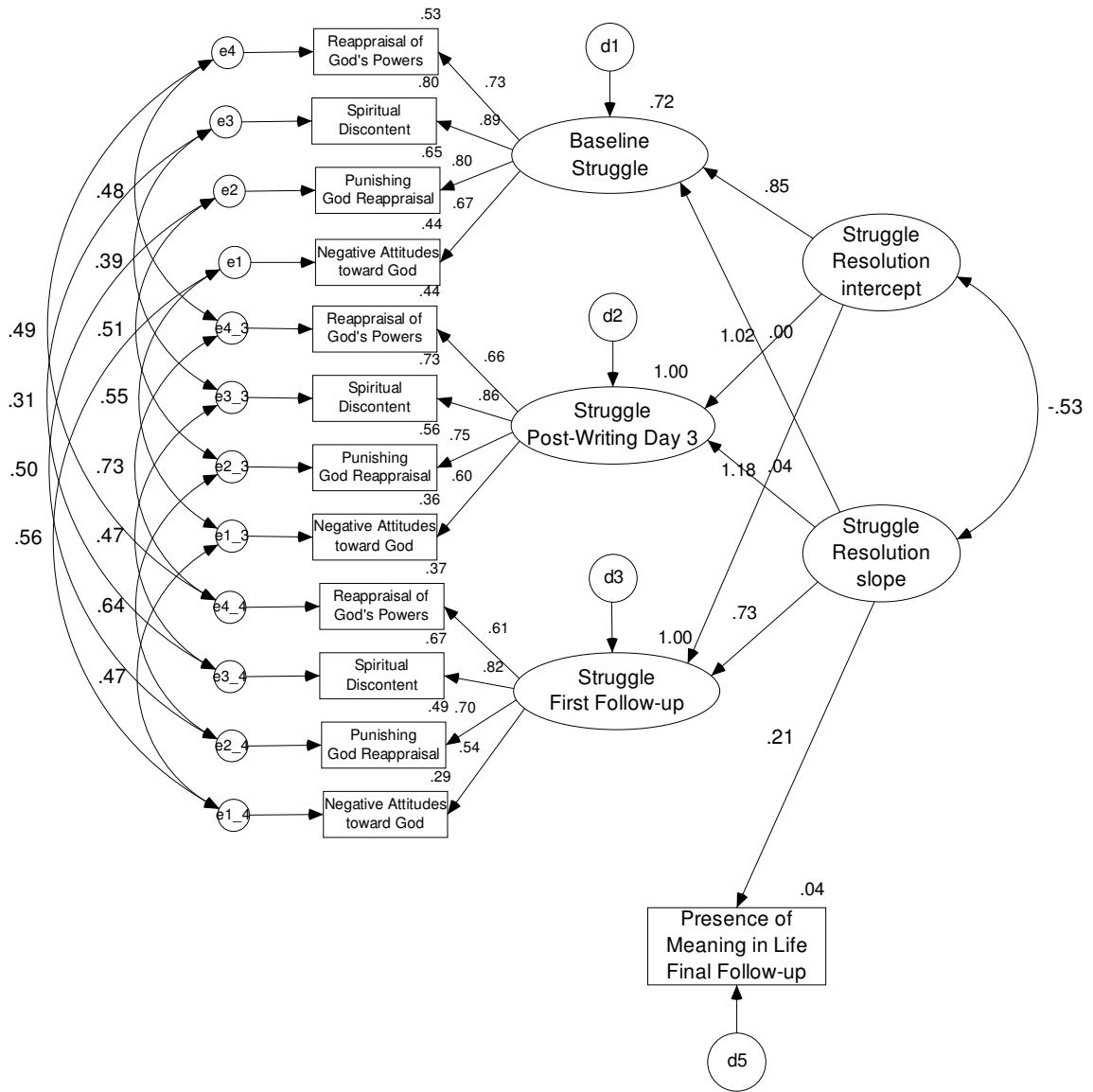
Figure 2. Latent growth curve depicting spiritual struggle resolution through first follow-up predicting presence of meaning at final follow-up.

Appendix

Writing Prompts

Day	Control	Intervention
One	Today and for the next two days, you will be asked to write about how you spend your time. For approximately 10 minutes, please write about how you spent your time yesterday. (*Repeated each day*) In your writing, please be as objective as possible. Omit your emotions or opinions. Instead, include as much detail as you need to describe what you did yesterday from the time you got up until the time you went to bed. For example, you might start with when your alarm went off and you got out of bed. You could include the things you ate, where you went, which buildings or objects you passed as you walked from place to place. The most important thing is that you described your day as accurately and objectively as possible.	Today and for the next two days, you will be asked to write about the negative event you described earlier. For approximately 10 minutes, please write your deepest thoughts and feelings about the event. In your writing, you might want to explore some of these questions. Feel free to answer some or all of them. • How do you make sense of this event? • What does this event make you think about the world, yourself, and a higher power? • What is God's role in these events? • Does thinking about this incident or situation cause you to experience questions, doubts, or negative feelings toward God? (*Repeated each day*) Remember that your responses are kept entirely confidential. Your writing will not be linked to you. The only exception is that if your writing indicates that you intend to harm yourself or others, we are legally bound to match your data with your email address. Above all, we respect your privacy. In your writing, don't worry about grammar, spelling, or sentence structure; just write. The important thing is that you really let go and dig down to your very deepest emotions and thoughts about the event and explore them in your writing. Please take the next 10 minutes to consider these questions and write your thoughts in the space below:
Two	For approximately 10 minutes, please write about what you did today since you woke up.	For approximately 10 minutes, please write your deepest thoughts and feelings about the negative personal event. **If you can, please direct your writing *to God*, the Universe... whatever higher power to whom you can write.** If you could say something to God about this event, what would you say?

		In your writing, you might want to continue explore some of these questions. Feel free to answer some or all of them. • How do you make sense of this event? • What does this event make you think about the world, yourself, and a higher power? • What is God's role in these events? • Does thinking about this incident or situation cause you to experience questions, doubts, or negative feelings toward God? You might want to explore this question as well: • How has your understanding of the event changed, if at all?
Three	For approximately 10 minutes, please write about how you plan to use your time over the next week.	For approximately 10 minutes, please take a few steps back and move away from your experience**, and write about the event as if you were watching it unfold to the distant you**. You might want to explore this question as well: • How has your understanding of the event changed, if at all?

References

Abeles, R., Ellison, C. G., George, L. K., Idler, E. L., Krause, N., Levin, J. S., et al. (1999). *Multidimensional measurement of Religiousness/Spirituality for use in health research*. Kalamazoo, MI: John E. Fetzer Institute.

Adkins, J. W., Weathers, F. W., McDevitt-Murphy, M., & Daniels, J. B. (2008). Psychometric properties of seven self-report measures of posttraumatic stress disorder in college students with mixed civilian trauma exposure. *Journal of Anxiety Disorders, 22,* 1393–1402.

Aflakseir, A., & Coleman, P. G. (2009). The influence of religious coping on the mental health of disabled Iranian war veterans. *Mental Health, Religion & Culture, 12*, 175-190.

Ai, A. L., Peterson, C., & Huang, B. (2003). The effect of religious-spiritual coping on positive attitudes of adult Muslim refugees from Kosovo and Bosnia. *International Journal for the Psychology of Religion, 13*, 29-47.

Altemeyer, B. (1988). *Enemies of freedom: Understanding right-wing authoritarianism*. San Francisco, CA US: Jossey-Bass.

Altemeyer, B., & Hunsberger, B. (1992). Authoritarianism, religious fundamentalism, quest, and prejudice. *International Journal for the Psychology of Religion, 2*, 113.

Altemeyer, B., & Hunsberger, B. (1997). *Amazing conversions: Why some turn to faith and others abandon religion*. Amherst, NY: Prometheus.

Altemeyer, B., & Hunsberger, B. (2005). Fundamentalism and authoritarianism. In R. F. Paloutzian, C. L. Park, R. F. Paloutzian & C. L. Park (Eds.), *Handbook of the*

psychology of religion and spirituality. (pp. 378-393). New York, NY US: Guilford Press.

Amodio, D. M., Jost, J. T., Master, S. L., & Yee, C. M (2007). Neurocognitive correlates of liberalism and conservatism. *Nature Neuroscience, 10,* 1246-1247.

Ano, G. G., & Vasconcelles, E. B. (2005). Religious coping and psychological adjustment to stress: A meta-analysis. *Journal of Clinical Psychology, 61*, 461-480.

Astin, A. W., Astin, H. S., Bryant, A. N., Calderone, S., Lindholm, J. A., & Szelenyi, K. (2004). *The spiritual life of college students: A national study of college students' search for meaning and purpose*. University of California, Los Angeles: Higher Education Research Institute.

Ayduk, Ö., & Kross, E. (2008). Enhancing the pace of recovery: Self-distanced analysis of negative experiences reduces blood pressure reactivity. *Psychological Science*, *19*(3), 229-231. doi:10.1111/j.1467-9280.2008.02073.x

Batson, C. D. (1976). Religion as prosocial: Agent or double agent? *Journal for the Scientific Study of Religion, 15*, 29-45.

Batson, C. D., Eidelman, S. H., Higley, S. L., & Russell, S. A. (2001). 'And who is my neighbor?' II: Quest religion as a source of universal compassion. *Journal for the Scientific Study of Religion, 40*, 39-50.

Batson, C. D., & Schoenrade, P. A. (1991a). Measuring religion as quest: I. Validity concerns. *Journal for the Scientific Study of Religion, 30*, 416-429.

Batson, C. D., & Schoenrade, P. A. (1991b). Measuring religion as quest: II. Reliability concerns. *Journal for the Scientific Study of Religion, 30*, 430-447.

113

Batson, C. D., Schoenrade, P., & Ventis, W. L. (1993). *Religion and the individual: A social-psychological perspective*. New York: Oxford University Press.

Batson, C. D., & Ventis, W. L. (1982). *The religious experience: A social-psychological perspective*. New York: Oxford University Press.

Baumeister, R. F., & Exline, J. (1999). Virtue, personality and social relations: Self-control as the moral muscle. *Journal of Personality, 67*, 1165-1194. doi:10.1111/1467-6494.00086

Baumeister, R. F., Vohs, K. D., & Tice, D. M. (2007). The strength model of self-control. *Current Directions in Psychological Science, 16*, 351-355. doi:10.1111/j.1467-8721.2007.00534.x

Beck, R., & Jessup, R. K. (2004). The multidimensional nature of quest motivation. *Journal of Psychology & Theology, 32*, 283-294.

Beike, D. R., & Wirth-Beaumont, E. T. (2005). Psychological closure as a memory phenomenon. *Memory*, *13*(6), 574-593. doi:10.1080/09658210444000241

Beitel, M., Ferrer, E., & Cecero, J. J. (2004). Psychological mindedness and cognitive style. *Journal of Clinical Psychology, 60*, 567-582.

Bentler, P.M. (1990). Comparative Fit Indexes in Structural Models. *Psychological Bulletin*, *107*, 238-246.

Bjorck, J. P., & Thurman, J. W. (2007). Negative life events, patterns of positive and negative religious coping, and psychological functioning. *Journal for the Scientific Study of Religion, 46*, 159-167.

Blake, D. D., Weathers, F. W., Nagy, L. M., Kaloupek, D. G., Charney, D. S., & Keane, T. M. (1998). *Clinician-administered PTSD scale for DSM-IV*. Boston, MA: National Center for Posttraumatic Stress Disorder.

Blanchard, E. B., Jones-Alexander, J., Buckley, T. C., & Forneris, C. A. (1996). Psychometric properties of the PTSD checklist (PCL). *Behaviour Research and Therapy, 34*, 669-673.

Boals, A., Banks, J. B., Hathaway, L. M., & Schuettler, D (2011). Coping with stressful events: Use of cognitive words in stressful narratives and the meaning-making process. *Journal of Social and Clinical Psychology, 30,* 378-403. doi:10.1521/jscp.2011.30.4.378

Bonanno, G. A., Galea, S., Bucciarelli, A., & Vlahov, D. (2007). What predicts psychological resilience after disaster? The role of demographics, resources, and life stress. *Journal of Consulting and Clinical Psychology, 75*, 671-682.

Bosworth, H. B., Park, K., McQuoid, D. R., Hays, J. C., & Steffens, D. C. (2003). The impact of religious practice and religious coping on geriatric depression. *International Journal of Geriatric Psychiatry, 18*, 905-914.

Bradley, R., Schwartz, A. C., & Kaslow, N. J. (2005). Posttraumatic stress disorder symptoms among low-income, African American women with a history of intimate partner violence and suicidal behaviors: Self-esteem, social support, and religious coping. *Journal of Traumatic Stress, 18*, 685-696.

Bryant, A. N., & Astin, H. S. (2008). The correlates of spiritual struggle during the college years. *The Journal of Higher Education, 79*, 1-27.

Burris, C. T., Jackson, L. M., Tarpley, W. R., & Smith, G. J. (1996). Religion as quest: The self-directed pursuit of meaning. *Personality and Social Psychology Bulletin, 22*, 1068-1076.

Burton, C. M., & King, L. A. (2008). Effects of (very) brief writing on health: The two-minute miracle. *British Journal of Health Psychology, 13*, 9-14.

Chickering, A. W. (1969). *Education and identity*. San Francisco: Jossey-Bass.

Chickering, A.W., & Reisser, L. (1993). *Education and identity*. San Francisco: Jossey-Bass.

Cole, B. S., Hopkins, C. M., Tisak, J., Steel, J. L., & Carr, B. I. (2008). Assessing spiritual growth and spiritual decline following a diagnosis of cancer: Reliability and validity of the spiritual transformation scale. *Psycho-Oncology, 17*, 112-121.

Conners, N. A., Whiteside-Mansell, L., & Sherman, A. C. (2006). Dimensions of religious involvement and mental health outcomes among alcohol- and drug-dependent women. Alcoholism Treatment Quarterly, 24, 89-108.

Cook, J. M., Elhai, J. D., & Arean, P. A. (2005). Psychometric properties of the PTSD checklist with older primary care patients. *Journal of Traumatic Stress, 18,* 371–376.

Donahue, M. J. (1985). Intrinsic and extrinsic religiousness: Review and meta-analysis. *Journal of Personality and Social Psychology, 48*, 400-419.

Edmondson, D. & Park, C.L. (2009). Shifting foundations: Religious belief change and adjustment in college students. *Mental Health, Religion & Culture, 12,* 289-302

116

Edmondson, D., Park, C. L., Chaudoir, S. R., & Wortmann, J. H. (2008). Death without

    God: Religious struggle, death concerns, and depression in the terminally ill.

    Psychological Science, 19, 754-758.

Erikson, E. H. (1968). *Identity: Youth and crisis*. New York: W.W. Norton.

Exline, J. J. (2009, August). Imagery exercises and anger toward god: Two experiments.

    In Amy Ai (Chair), Existential Crisis--the Role of Spiritual Struggle in Adversity.

    Symposium conducted at the Annual Convention of the American Psychological

    Association, Toronto, Canada.

Exline, J. J., & Martin, A. (2005). Anger toward God: A new frontier in forgiveness

    research. In E. L. Worthington (Ed.), *Handbook of forgiveness* (pp. 73-89). New

    York: Routledge.

Exline, J. J., & Rose, E. (2005). Religious and spiritual struggles. In R. F. Paloutzian, &

    C. L. Park (Eds.), *Handbook of the psychology of religion and spirituality* (pp.

    315-330). New York: Guilford Press.

Exline, J. J., Smyth, J. M., Gregory, J., Hockemeyer, J., & Tulloch, H. (2005). Religious

    framing by individuals with PTSD when writing about traumatic experiences. *The*

    International Journal for the Psychology of Religion, 15, 17-33.

Exline, J. J., Yali, A. M., & Lobel, M. (1999). When god disappoints: Difficulty

    forgiving god and its role in negative emotion. *Journal of Health Psychology, 4*,

    365-379.

Exline, J. J., Yali, A. M., & Sanderson, W. C. (2000). Guilt, discord, and alienation: The

    role of religious strain in depression and suicidality. *Journal of Clinical*

    Psychology, 56, 1481-1496.

Fallot, R. D., & Heckman, J. P. (2005). Religious/Spiritual coping among women trauma survivors with mental health and substance use disorders. *The Journal of Behavioral Health Services & Research, 32*, 215-226.

Fenster, J. (2009). Does resolution of prior stressful events predict adaptive coping and adjustment in cancer survivors? (Doctoral dissertation). Retrieved from http://digitalcommons.uconn.edu/dissertations/AAI3383906/

Fitchett, G., Murphy, P. E., Kim, J., Gibbons, J. L., Cameron, J. R., & Davis, J. A. (2004). Religious struggle: Prevalence, correlates and mental health risks in diabetic, congestive heart failure, and oncology patients. *International Journal of Psychiatry in Medicine, 34*, 179-196.

Fitchett, G., Rybarczyk, B. D., DeMarco, G. A., & Nicholas, J. J (1999). The role of religion in medical rehabilitation outcomes: A longitudinal study. *Rehabilitation Psychology, 44*, 333-353.

Foa, E. B., Hembree, E. A., & Rothbaum, B. O. (2007). *Prolonged exposure therapy for PTSD: Emotional processing of traumatic experiences: Therapist guide*. New York: Oxford University Press.

Frazier, P., Anders, S., Perera, S., Tomich, P., Tennen, H., Park, C., et al. (2009). Traumatic events among undergraduate students: Prevalence and associated symptoms. *Journal of Counseling Psychology, 56*, 450-460.

Frazier, P., Tennen, H., Gavian, M., Park, C., Tomich, P., & Tashiro, T. (2009). Does self-reported posttraumatic growth reflect genuine positive change? *Psychological Science*, *20*(7), 912-919. doi:10.1111/j.1467-9280.2009.02381.x

Galek, K., Krause, N., Ellison, C. G., Kudler, T., & Flannelly, K. J. (2008). Religious

    doubt and mental health across the lifespan. *Journal of Adult Development, 14*,

    16-25.

Gall, T. L., Charbonneau, C., & Florack, P. (2009, August). Spirituality as a predictor of

    post-traumatic growth in the context of breast cancer. Poster presented at the

    Annual Convention of the American Psychological Association, Toronto, Canada.

Gall, T. L., Guirguis-Younger, M., Charbonneau, C., & Florack, P (2009). The trajectory

    of religious coping across time in response to the diagnosis of breast cancer.

    Psycho-Oncology, 18, 1165-1178. doi:10.1002/pon.1495

Gauthier, K. J., Christopher, A. N., Walter, M. I., Mourad, R., & Marek, P. (2006).

    Religiosity, religious doubt, and the need for cognition: Their interactive

    relationship with life satisfaction. *Journal of Happiness Studies, 7*, 139-154.

Genia, V. (1996). I, E, quest, and fundamentalism as predictors of psychological and

    spiritual well-being. *Journal for the Scientific Study of Religion, 35*, 56.

Gilliss, T. (Senior Editor), & Tippett, K. (Host). (2012, April 15). *On Being* [Audio

    podcast transcript]. Retrieved from

    http://being.publicradio.org/programs/2012/remembering-god/transcript.shtml

Gould, S. J. (2002). *The median isn't the message.* Retrieved April 12, 2012, from

    http://www.cancerguide.org/median_not_msg.html

Hall, C. M. (1986). Crisis as opportunity for spiritual growth. *Journal of Religion and

    Health, 25*, 8-17.

Harris, J. I., Erbes, C. R., Engdahl, B. E., Olson, R. H. A., Winskowski, A. M., & McMahill, J. (2008). Christian religious functioning and trauma outcomes. *Journal of Clinical Psychology, 64*, 17-29.

Higher Education Research Institute. (2004). *Preliminary findings on spiritual development and the college experience: A longitudinal analysis.* Retrieved from http://spirituality.ucla.edu/docs/results/pilot/Longitudinal_00-03.pdf

Hick, J. (1966). *Evil and the God of love*. New York: Harper & Row.

Holcomb, G.L., & Nonneman, A.J. (2004). Faithful change: Exploring and assessing faith development in Christian liberal arts undergraduates. *New Directions for Institutional Research, 122,* 93–104.

Hollis, S., & Campbell, F (1999). What is meant by intention to treat analysis? Survey of published randomised controlled trials. *BMJ*, *319*, 670-674. doi:10.1136/bmj.319.7211.670

Horneffer, K. J., & Chan, K (2009). Alexithymia and relaxation: Considerations in optimising the emotional effectiveness of journaling about stressful experiences. *Cognition and Emotion, 23,* 611-622.

Hu, L. & Bentler, P. (1999). Cutoff criteria for fit indices in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal, 6,* 1-55.

Hunsberger, B., Alisat, S., Pancer, S. M., & Pratt, M. (1996). Religious fundamentalism and religious doubts: Content, connections, and complexity of thinking. *International Journal for the Psychology of Religion, 6*, 201-220.

Hunsberger, B., McKenzie, B., Pratt, M., & Pancer, S. M. (1993). Religious doubt: A

social psychological analysis. In M. L. Lynn, & D. O. Moberg (Eds.), *Research in*

the social scientific study of religion (pp. 27-51). Greenwich, CT: JAI Press.

Hunsberger, B., Pratt, M., & Pancer, S. M. (2002). A longitudinal study of religious

doubts in high school and beyond: Relationships, stability, and searching for

answers. *Journal for the Scientific Study of Religion, 41*, 255-266.

Idler, E. L., Musick, M. A., Ellison, C. G., George, L. K., Krause, N., Ory, M. G., et al.

(2003). Measuring multiple dimensions of religion and spirituality for health

research: Conceptual background and findings from the 1998 general social

survey. *Research on Aging, 25*, 327-365.

James, W. (1936). *The varieties of religious experience*. Oxford England: Modern

Library.

Johnson, T. J., Sheets, V. L., & Kristeller, J. L. (2008). Identifying mediators of the

relationship between religiousness/spirituality and alcohol use. *Journal of Studies*

on Alcohol and Drugs, 69, 160-170.

Kaplan, D. (2008). Structural Equation Modeling: Foundations and Extensions, 2nd ed.. In

Advanced Quantitative Techniques in the Social Sciences: Vol. 10. Madison,

Wisconsin: University of Wisconsin. Retrieved from

http://www.sagepub.com/upm-data/23173_Chapter_8.pdf

Kenny, D. (2011a). *Growth Curve Models*. Retrieved from

http://davidakenny.net/cm/causalm.htm

Kenny, D. (2011b). *Single Latent Variable Model.* Retrived from

http://davidakenny.net/cm/1factor.htm

King, L. A., Scollon, C. K., Ramsey, C., & Williams, T. (2000). Stories of life transition: Subjective well-being and ego development in parents of children with Down Syndrome. *Journal of Research in Personality*, *34*, 509-536. doi:10.1006/jrpe.2000.2285

Klaassen, D. W., & McDonald, M. J. (2002). Quest and identity development: Re-examining pathways for existential search. *International Journal for the Psychology of Religion, 12*, 189-200.

Kline, R. (2010). *Principles and Practice of Structural Equation Modeling.* The Guilford Press.

Kirkpatrick, L. A. (1993). Fundamentalism, Christian orthodoxy, and intrinsic religious orientation as predictors of discriminatory attitudes. *Journal for the Scientific Study of Religion, 32*, 256.

Koenig, H. G., Pargament, K. I., & Nielsen, J. (1998). Religious coping and health status in medically ill hospitalized older adults. *The Journal of Nervous and Mental Disease, 186*, 513-521.

Kojetin, B. A., McIntosh, D. N., Bridges, R. A., & Spilka, B. (1987a). Quest: Constructive search or religious conflict? *Journal for the Scientific Study of Religion, 26*, 111-115.

Kojetin, B. A., McIntosh, D. N., Bridges, R. A., & Spilka, B. (1987b). Research note/ quest: Constructive search or religious conflict? *Journal for the Scientific Study of Religion, 26*, 111-115.

Kooistra, W. P., & Pargament, K. I. (1999). Religious doubting in parochial school adolescents. *Journal of Psychology & Theology, 27*, 33-42.

Krause, N. (2006). Religious doubt and psychological well-being: A longitudinal investigation. *Review of Religious Research, 47*, 287-302.

Krause, N., & Ellison, C. G. (2009). The doubting process: A longitudinal study of the precipitants and consequences of religious doubt in older adults. *Journal for the Scientific Study of Religion, 48*, 293-312.

Krause, N., Ingersoll-Dayton, B., Ellison, C. G., & Wulff, K. M. (1999). Aging, religious doubt, and psychological well-being. *The Gerontologist, 39*, 525-533.

Krause, N., & Wulff, K. M. (2004). Religious doubt and health: Exploring the potential dark side of religion. *Sociology of Religion, 65*, 35-56.

Kunst, J. L., Bjorck, J. P., & Tan, S. (2000). Causal attributions for uncontrollable negative events. *Journal of Psychology and Christianity, 19*, 47-60.

Kross, E., & Ayduk, Ö. (2008). Facilitating adaptive emotional analysis: Distinguishing distanced-analysis of depressive experiences from immersed-analysis and distraction. *Personality and Social Psychology Bulletin, 34*, 924-938.

Kross, E., Ayduk, O., & Mischel, W. (2005). When asking 'why' does not hurt: Distinguishing rumination from reflective processing of negative emotions. *Psychological Science, 16*, 709-715.

Kruglanski, A. W., Webster, D. M., & Klem, A. (1993). Motivated resistance and openness to persuasion in the presence or absence of prior information. *Journal of Personality and Social Psychology, 65*, 861-876.

Kunst, J. L., Bjorck, J. P., & Tan, S. (2000). Causal attributions for uncontrollable negative events. *Journal of Psychology and Christianity, 19*, 47-60.

Lachin, J. M (2000). Statistical considerations in the intent-to-treat principle. *Controlled clinical trials, 21*, 167-189.

Lachin, J. (2007). Intention-to-Treat Analysis. Wiley Encyclopedia of Clinical Trials. Hoboken, NJ, USA: John Wiley & Sons, Inc.

Laytner, A. (1990). *Arguing with God: A Jewish tradition*. Northvale, N.J.: J. Aronson.

Levenson, M. R., Jennings, P. A., Aldwin, C. M., & Shiraishi, R. W. (2005). Self-transcendence: Conceptualization and measurement. *The International Journal Of Aging & Human Development*, *60*, 127-143. doi:10.2190/XRXM-FYRA-7U0X-GRC0

Lovibond, P. F., & Lovibond, S. H. (1995). The structure of negative emotional states: Comparison of the depression anxiety stress scales (DASS) with the beck depression and anxiety inventories. *Behaviour Research and Therapy, 33*, 335-343.

MacDonald, A. P. (1970). Revised scale for ambiguity tolerance: Reliability and validity. *Psychological Reports, 26*, 791-798.

McConnell, K. M., Pargament, K. I., Ellison, C. G., & Flannelly, K. J. (2006). Examining the links between spiritual struggles and symptoms of psychopathology in a national sample. *Journal of Clinical Psychology, 62*, 1469-1484.

McFarland, S. G. (1989). Religious orientations and the targets of discrimination. *Journal for the Scientific Study of Religion, 28*, 324.

McIntosh, D. N., & Spilka, B. (1990). Religion and physical health: The role of personal faith and control. In M. L. Lynn, & D. O. Moberg (Eds.), *Research in the social scientific study of religion* (pp. 167-194). Greenwich, CT: JAI Press.

Meisenhelder, J. B., & Marcum, J. P. (2004). Responses of clergy to 9/11: Posttraumatic stress, coping, and religious outcomes. *Journal for the Scientific Study of Religion, 43*, 547-554.

Mickley, J. R., Pargament, K. I., Brant, C. R., & Hipp, K. M. (1998). God and the search for meaning among hospice caregivers. *Hospice Journal, 13*, 1-17.

Montori, von, M. & Guyatt, G. H. (2001). Intention-to-treat principle. *Canadian Medical Association Journal, 165*, 1339-1341.

Pargament, K. I. (1997). *The psychology of religion and coping: Theory, research, practice*. New York: Guilford Press.

Pargament, K. I. (2007). *Spiritually integrated psychotherapy: Understanding and addressing the sacred*. New York, NY US: Guilford Press.

Pargament, K. I., Ano, G. G., & Wachholtz, A. B. (2005). The religious dimension of coping: Advances in theory, research, and practice. In R. F. Paloutzian, & C. L. Park (Eds.), *Handbook of the psychology of religion and spirituality* (pp. 479-495). New York: Guilford Press.

Pargament, K. I., Desai, K. M., & McConnell, K. M. (2006). Spirituality: A pathway to posttraumatic growth or decline? In L. G. Calhoun, & R. G. Tedeschi (Eds.), *Handbook of posttraumatic growth: Research & practice.* (pp. 121-137). Mahwah, NJ US: Lawrence Erlbaum Associates Publishers.

Pargament, K. I., Ensing, D. S., Falgout, K., & Olsen, H. (1990). God help me: I. religious coping efforts as predictors of the outcomes to significant negative life events. *American Journal of Community Psychology, 18*, 793-824.

Pargament, K. I., Koenig, H. G., & Perez, L. M. (2000). The many methods of religious
coping: Development and initial validation of the RCOPE. *Journal of Clinical
Psychology, 56*, 519-543.

Pargament, K. I., Koenig, H. G., Tarakeshwar, N., & Hahn, J. (2001). Religious struggle
as a predictor of mortality among medically ill elderly patients: A 2-year
longitudinal study. *Archives of Internal Medicine, 161*, 1881-1885.

Pargament, K. I., Koenig, H. G., Tarakeshwar, N., & Hahn, J. (2004). Religious coping
methods as predictors of psychological, physical and spiritual outcomes among
medically ill elderly patients: A two-year longitudinal study. *Journal of Health
Psychology, 9*, 713-730.

Pargament, K. & Mahoney, A. (2002). Spirituality: Discovering and conserving the
sacred. In C.R. Snyder & S.J. Lopez (Eds.), *Handbook of positive psychology.*
(pp. 646-659). New York, NY, US: Oxford University Press.

Pargament, K. I., Murray-Swank, N., Magyar, G., & Ano, G. (2005). Spiritual struggle: A
phenomenon of interest to psychology and religion. In W. R. Miller, & H. D.
Delaney (Eds.), *Judeo-Christian perspectives on psychology: Human nature,
motivation, and change* (pp. 245-268). Washington, D.C.: APA Press.

Pargament, K. I., Smith, B. W., Koenig, H. G., & Perez, L. (1998). Patterns of positive
and negative religious coping with major life stressors. *Journal for the Scientific
Study of Religion, 37*, 710-724.

Pargament, K. I., Tarakeshwar, N., Ellison, C. G., & Wulff, K. M (2001). Religious
coping among the religious: The relationships between religious coping and well

being in a national sample of Presbyterian clergy, elders, and members. *Journal for the Scientific Study of Religion, 40*, 497-513.

Pargament, K. I., Zinnbauer, B.J., Scott, A.B., Butter, E.M., Zerowin, J., & Stanik, P. (1998). Red flags and religious coping: Identifying some warning signs among people in crisis. *Journal of Clinical Psychology, 54*, 77-89.

Park, C. L. (2005). Religion as a meaning-making framework in coping with life stress. *Journal of Social Issues, 61*, 707-729.

Park, C. L. (2008). Testing the meaning making model of coping with loss. *Journal of Social & Clinical Psychology, 27*, 970-994.

Park, C. L. (2010). Making sense of the meaning literature: An integrative review of meaning making and its effects on adjustment to stressful life events. *Psychological Bulletin*, *136*(2), 257-301. doi:10.1037/a0018301

Park, C. L., & Blumberg, C. J. (2002). Disclosing trauma through writing: Testing the meaning-making hypothesis. *Cognitive Therapy and Research, 26*, 597-616.

Park, C. L., & Cohen, L. H. (1993). Religious and nonreligious coping with the death of a friend. *Cognitive Therapy and Research, 17*, 561-577.

Park, C. L., Cohen, L. H., & Murch, R. L. (1996). Assessment and prediction of stress-related growth. *Journal of Personality, 64*, 71-105.

Park, C. L., & Edmondson, D. (2010). *Assessment of meaning making.* Unpublished manuscript.

Park, C. L., Edmondson, D., Fenster, J. R., & Blank, T. O. (2008). Meaning making and psychological adjustment following cancer: The mediating roles of growth, life

meaning, and restored just-world beliefs. *Journal of Consulting and Clinical Psychology, 76*, 863-875.

Park, C. L., & Fenster, J. R. (2004). Stress-related growth: Predictors of occurrence and correlates with psychological adjustment. *Journal of Social & Clinical Psychology, 23*, 195-215.

Park, C. L., & Halifax, R. (2011). Religion and spirituality in adjusting to bereavement: Grief as burden, grief as gift. In R. A. Neimeyer, D. L. Harris, H. R. Winokuer, G. F. Thornton (Eds.). *Grief and bereavement in contemporary society: Bridging research and practice* (pp. 355-363). New York, NY US: Routledge/Taylor & Francis Group.

Parks, S. D. (2000). *Big questions, worthy dreams: Mentoring young adults in their search for meaning, purpose, and faith*. San Francisco: Jossey-Bass.

Pascarella, E. T., & Terenzini, P. T. (1991). *How college affects students*. New York: Jossey-Bass.

Pearlin, L. I., & Schooler, C. (1978). The structure of coping. *Journal of Health and Social Behavior, 19*, 2-21.

Pennebaker, J. W. (1997). Writing about emotional experiences as a therapeutic process. *Psychological Science, 8*, 162-166.

Perry, W. G. (1968). *Forms of intellectual and ethical development in the college years: A scheme*. San Francisco: Jossey-Bass.

Phillips, R. E., III, & Stein, C. H. (2007). God's will, God's punishment, or God's limitations? Religious coping strategies reported by young adults living with serious mental illness. *Journal of Clinical Psychology, 63*, 528-540.

Preacher, K.J., Wichman, A.L., MacCallum, R.C., & Briggs, N.E. (2008). Latent Growth
Curve Modeling. In T.F. Liao (Series Ed.), *Quantitative Applications in the Social
Sciences: Vol. 07-157.*

Proffitt, D., Cann, A., Calhoun, L. G., & Tedeschi, R. G. (2007). Judeo-Christian clergy
and personal crisis: Religion, posttraumatic growth and well being. *Journal of
Religion & Health, 46*, 219-231.

Rosmarin, D. H., Pargament, K. I., & Flannelly, K. J. (2009). Do spiritual struggles
predict poorer physical/mental health among Jews? *International Journal for the
Psychology of Religion, 19*, 244-258.

Salsman, J. M., & Carlson, C. R. (2005). Religious orientation, mature faith, and
psychological distress: Elements of positive and negative associations. *Journal for
the Scientific Study of Religion, 44*, 201-209.

Shackman et al. (2009). Right dorsolateral prefrontal cortical activity and behavioral
inhibition. *Psychological Science*, *20*. 1500-1504.

Shaw, A., Joseph, S., & Linley, P. A. (2005). Religion, spirituality, and posttraumatic
growth: A systematic review. *Mental Health, Religion & Culture, 8*, 1-11.

Sherman, A. C., Simonton, S., Latif, U., Tricot, G., & Spohn, R. (2005). Religious
struggle and religious comfort in response to illness: Health outcomes among
stem cell transplant patients. *Journal of Behavioral Medicine, 28*, 359-367.

Sloan, D. M., & Marx, B. P. (2004). A closer examination of the structured written
disclosure procedure. *Journal of Consulting and Clinical Psychology, 72*, 165-
175.

Smith, B. W., Pargament, K. I., Brant, C., & Oliver, J. M. (2000). Noah revisited:

    Religious coping by church members and the impact of the 1993 Midwest flood.

    Journal of Community Psychology, 28, 169-186.

Smucker, C. (1996). A phenomenological description of the experience of spiritual

    distress. *Nursing Diagnosis, 7*, 81-91.

Steger, M. F., Frazier, P., Oishi, S., & Kaler, M. (2006). The meaning in life

    questionnaire: Assessing the presence of and search for meaning in life. *Journal*

    of Counseling Psychology, 53, 80-93.

Tabachnik, B.G., & Fidell, L.S. (2006). *Using Multivariate Statistics*. 5th ed. Boston, MA:

    Allyn & Bacon.

Tarakeshwar, N., & Pargament, K. I. (2001). Religious coping in families of children

    with autism. *Focus on Autism and Other Developmental Disabilities, 16*, 247-260.

Thompson, S. C. (1981). Will it hurt less if I can control it? A complex answer to a

    simple question. *Psychological Bulletin, 90*, 89-101.

Thompson, M. P., & Vardaman, P. J. (1997). The role of religion in coping with the loss

    of a family member to homicide. *Journal for the Scientific Study of Religion, 36*,

    44-51.

Tsang, J., & McCullough, M. E. (2003). Measuring religious constructs: A hierarchical

    approach to construct organization and scale selection. In S. J. Lopez, C. R.

    Snyder, S. J. Lopez & C. R. Snyder (Eds.), *Positive psychological assessment: A*

    handbook of models and measures. (pp. 345-360). Washington, DC US:

    American Psychological Association.

VandeCreek, L., Janus, M., Pennebaker, J. W., & Binau, B. (2002). Praying about difficult experiences as self-disclosure to God. *International Journal for the Psychology of Religion, 12*, 29-39.

Warner, H. L., Mahoney, A., & Krumrei, E. J. (2009). When parents break sacred vows: The role of spiritual appraisals, coping, and struggles in young adults' adjustment to parental divorce. *Psychology of Religion And Spirituality, 1*, 233-248. doi:10.1037/a0016787

Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology, 54*, 1063-1070.

Watson, P. J., Morris, R. J., Hood, R. W. J., Miller, L., & Waddell, M. G. (1999). Religion and the experiential system: Relationships of constructive thinking with religious orientation. *International Journal for the Psychology of Religion, 9*, 195-207.

Watson, P. J., Morris, R. J., Hood, R. W. J., Milliron, J. T., & Stutz, N. L. (1998). Religious orientation, identity and the quest for meaning in ethics within an ideological surround. *International Journal for the Psychology of Religion, 8*, 149-164.

Wilson, J. T., & Boden, J. M. (2008). The effects of personality, social support and religiosity on posttraumatic growth. *Australasian Journal of Disaster and Trauma Studies*, *2008 (1)*. Retrieved from http://trauma.massey.ac.nz/

Witvliet, C. V. O., Phipps, K. A., Feldman, M. E., & Beckham, J. C. (2004).

 Posttraumatic mental and physical health correlates of forgiveness and religious

 coping in military veterans. *Journal of Traumatic Stress, 17*, 269-273.

Wood, B. T., Worthington Jr., E., Exline, J., Yali, A., Aten, J. D., & McMinn, M. R.

 (2010). Development, refinement, and psychometric properties of the Attitudes

 toward God Scale (ATGS-9). *Psychology of Religion And Spirituality*, *2*(3), 148-

 167. doi:10.1037/a0018753

Wortmann, J. H., Park, C. L., & Edmondson, D. (2011). Trauma and PTSD symptoms:

 Does spiritual struggle mediate the link? *Psychological Trauma: Theory,*

 Research, Practice, and Policy, 3, 442-452.

Yangarber-Hicks, N. (2004). Religious coping styles and recovery from serious mental

 illnesses. *Journal of Psychology & Theology, 32*, 305-317.

Zinnbauer, B. J., & Pargament, K. I. (2005). Religiousness and spirituality. In R. F.

 Paloutzian, & C. L. Park (Eds.), *Handbook of the psychology of religion and*

 spirituality (pp. 21-42). New York: Guilford Press.