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Forgiveness, Gratitude, Humility, and Spiritual Struggle: Associations with Religious Belief Status and Suicide Risk

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A dissertation

presented to

the faculty of the Department of Psychology

East Tennessee State University

In partial fulfillment

of the requirements for the degree

Doctor of Philosophy in Psychology

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by

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August 2021

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Keywords: suicide, spiritual struggle, religiosity, forgiveness, gratitude, humility

ABSTRACT

Forgiveness, Gratitude, Humility, and Spiritual Struggle: Associations with Religious Belief Status and Suicide Risk

by

Benjamin B. Hall

Religion is a known contributor to suicide risk, with both positive and negative effects. Negative religious experiences, such as spiritual struggle, can exacerbate suicide risk. Alternatively, religion may promote positive psychological characteristics associated with reduced suicide risk, such as forgiveness, gratitude, and humility. However, research has yet to assess how religious changes, including conversion and deconversion, affect the linkage between religious risk and protective factors and suicidal behavior. We conducted three studies assessing these associations across four belief status groups: life-long religious believers, former religious non-believers who now believe, life-long religious non-believers, and former religious believers who no longer believe. Participants recruited online completed the Suicidal Behaviors Questionnaire – Revised, the Religious and Spiritual Struggles Scale, the Heartland Forgiveness Scale, the Gratitude Questionnaire, and the Comprehensive Intellectual Humility Scale. In our first study, we assessed differences in mean levels of spiritual struggle, forgiveness, humility, and gratitude, across each group. In our second study, we assessed the association between forgiveness, gratitude, humility, spiritual struggle and suicide risk, and differences in these relations across each group. In our final study, we assessed the potential moderating effect of forgiveness, gratitude, and humility on the relation between spiritual struggle and suicide risk, and differences in these moderating effects for each group. Our results indicate that some positive psychological

virtues, and their impact on suicide risk may differ based on religious belief status. Similarly, our results suggest that while spiritual struggles are associated with suicide risk regardless of religious belief status, positive psychological variables (i.e., forgiveness, gratitude, humility) may mitigate suicide risk differently based on one's religious belief status. Changes in, or the maintenance of, one's religious beliefs may be an important consideration in the development of positive psychological interventions (e.g., forgiveness therapy, gratitude diary) aimed at ameliorating suicide risk in the context of spiritual struggle. Additionally, religiously oriented psychotherapies (e.g., RI-CBT) may be an important therapeutic intervention for individuals at high risk for suicide experiencing spiritually related distress.

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Chapter 1. Introduction

Suicide rates are growing in the United States (Murphy et al., 2017), making suicide a leading cause of death and major public health concern, with more than 47,000 deaths by suicide occurring annually (Hedegaard et al., 2020). Moreover, for every death by suicide, approximately 25 suicide attempts occur (Shepard et al., 2015), resulting in an estimated 1.3 million suicide attempts per year (Substance Abuse and Mental Health Services Administration [SAMHSA], 2016). Approximately 4 percent of the U.S. adult population experiences serious thoughts of suicide and an estimated 1.1 percent of adults planned to end their life in the past year (SAMHSA, 2017). Further, the personal impact of suicide, including bereavement and psychological distress, reaches more than one-third of the U.S. adult population (Feigelman et al., 2018).

Previous theory and research have contributed to an enhanced understanding of risk and protective factors for suicide, a necessary step toward the development of effective prevention and intervention strategies. Among identified risk and protective factors, religion and spirituality are long-standing, well-established contributors to suicide risk (Caribe et al., 2015; Hall et al., 2020). Indeed, interest in this association can be traced to Emile Durkheim, whose integration theory of suicide was developed from his observation, in 1897, of higher rates of suicide among Protestants than Catholics. Durkheim proposed that religion serves the function of social integration, which he suggested was the mechanism of action by which religion protects against suicide. Further, he posited that Protestantism is a less socially integrated denomination than Catholicism, resulting in higher rates of suicide for Protestants. Despite criticism (Stark et al., 1983), the prominence of Durkheim's integration theory of suicide has persisted in the current literature on religion and suicide.

Additional theories addressing the linkage between religiosity and suicide have gained prominence since Durkheim's initial proposition, including religious commitment theory (Stack, 1983) and the network theory of suicide (Pescosolido & Georgianna, 1989). To begin, religious commitment theory posits that specific ideological beliefs, including "the degree of commitment to a few core aspects of religion," are a critical component of the protective quality of religion against suicide (Stack, 1983, p. 364). For example, belief in an afterlife, in an opposing spiritual force (e.g., Satan, the devil), or in a responsive deity, represent aspects of a cognitive framework proposed to be protective against suicide. Per religious commitment theory, the degree of an individual's commitment to these beliefs is proposed to be more important in reducing suicide risk than the degree to which a larger religious community shares these beliefs (i.e., integration).

Building on Durkheim's integration theory, the network theory of suicide highlights the importance of both religious integration and religion's tendency to regulate social behavior (Pescosolido & Georgianna, 1989), positing that susceptibility to suicide is dependent upon the interaction between the integrative and regulatory roles of religion. According to the network theory, suicide risk is mitigated when a religious network (e.g., religious congregation) contributes to perceptions of network integration (e.g., social support, belongingness) and regulation of social beliefs and behaviors (e.g., substance misuse).

In sum, theoretical foundations of the link between religion and suicide highlight several functions of religion. First, religion serves as a community offering benefits (e.g., social support, sense of belonging) that are protective of suicide, independent of the specific ideologies of the religion. Second, religion promotes specific cognitive frameworks (e.g., belief in an afterlife, belief in a responsive deity) that protect against suicide, independent of the social benefits of the

religion. Finally, religion fosters an interaction between social integration and behavioral regulation that minimizes suicide risk.

Yet, despite growing theoretical and empirical support for the benefit of religion for suicide risk, gaps in the literature remain. For instance, the impact of religious conversion and deconversion on suicide has yet to be empirically examined. Religious conversion can be defined as "a process of religious change that takes place in a dynamic force field involving people, institutions, events, ideas, and experiences" (Rambo & Bauman, 2012, p. 880). Rambo and Bauman present a model of religious conversion consisting of 7 stages: context, crisis, quest, encounter, interaction, commitment, and consequences. The context stage comprises environmentally influential forces that exist at both the macro and micro level (e.g., family, neighborhood, religious congregation). The stage of crisis is a period of an individual's life marked by instability in religious, cultural, political, or psychological identity. The quest stage is one in which individuals pursue meaning and purpose for their life. The encounter stage represents the first point of contact between the potential convert and an advocate for, or representative of, the group to which the individual converts. The interaction stage is the period in which the convert engages more intensely with a group, learning rules, ideologies, and expectations. Commitment is the stage in which the convert makes an explicit commitment regarding their participation in the group. Finally, the stage of consequences is the point at which the convert evaluates the outcome of the conversion and identifies both positive and negative consequences. Overall, although scholars agree that conversion is an individualized process and that no single conceptualization is applicable to all conversions, it is generally presumed that conversion occurs as a process of stages, like those proposed by Rambo and Bauman (2012).

There is agreement that deconversion, while similar to conversion, involves different mechanisms of change. Deconversion can be understood as "a process in which religious people reduce the importance of religion to their self-identity and may involve loss of faith, disaffiliation from religious communities, spiritual quest, moral criticism, and emotional suffering" (Greenwald et al., 2018, p. 1). Streib and Keller (2003) propose five elements of the deconversion process including (1) loss of religious experience (i.e., loss of meaning, purpose, or experiences of God), (2) intellectual doubt, rejection of, or opposition to specific beliefs (e.g., doubting that God created the world in 7 days), (3) rejection of religious rituals (e.g., worship services), (4) emotional suffering, and (5) disaffiliation from the group.

Religious conversion/deconversion is a complex experience that, while often accompanied by positive emotional experiences (e.g., feelings of freedom, a sense of belonging), may also result in significant psychological distress (e.g., guilt, shame, uncertainty). Such distress may have negative implications for mental health, including suicide risk. Although previous research has compared the mental health status and suicide risk of individuals of varying belief statuses (e.g., religious believers compared to non-believers), conversion status has been neglected; that is, whether the individual has always held their current beliefs (i.e., lifelong believers, lifelong non-believers) or converted to their current belief status (i.e., religious converts, religious deconverts). Importantly, religious believers and non-believers who have always held their beliefs may be distinct from religious believers and non-believers who converted to this belief status, with differing trajectories of psychosocial and religious-spiritual well-being across groups. For example, among an adult Chinese community sample, converts to Christianity reported less perceived stress than those who have always self-identified as Christian (Hui et al., 2017).

In general, however, regardless of the timing of conversion (e.g., childhood versus adulthood), previous theory and research suggest that having a religious or spiritual worldview may be protective against suicide. In addition to promotion of social integration, fostering of a protective belief system, and regulation of maladaptive social behaviors (e.g., substance misuse; Pescosolido & Georgianna, 1989; Stack, 1983), more recent theoretical investigation has suggested additional explanations for the association between religion and mental health outcomes. For example, the social signaling model of religion and mental health (Wood, 2017) suggests that religion requires effortful rituals and practices (e.g., prayer, church attendance, fasting) that result in the development of self-regulation over time, and that this increase in self-regulation is the causal mechanism in the beneficial association between religion and mental well-being (McCullough & Willoughby, 2009). Further, it is proposed that self-regulation may serve as an "overarching virtue" that promotes the expression of positive psychological constructs such as gratitude, forgiveness, and humility (Schnitker & Emmons, 2017). Thus, religion may directly impact mental health via inculcation of its tenets but may also benefit mental well-being through enhancement of self-regulation. Yet, again, no research has examined how changes in religious belief (e.g., conversion, deconversion) affect the development and expression of these positive psychological virtues. Importantly, although religion may serve as a source for the promotion of such positive psychological variables, the virtues are not exclusive to individuals with religious or spiritual worldviews.

Of note, most theoretical and empirical investigations of the associations between religion, spirituality and suicide have focused on the protective components of religion and spirituality (e.g., religious commitment, social support); however, there may also be negative aspects of religious and spiritual experience that exacerbate suicide risk. For example, spiritual

struggle, which occurs “when some aspect of religious belief, practice or experience becomes a focus of negative thoughts or emotions, concern or conflict” (Exline et al., 2014, p. 208), is a well-established risk factor for suicide and other negative psychosocial outcomes including depression, guilt, alienation, and poor psychological adjustment to negative life events (Ellison & Lee, 2010; Exline et al., 2000). Such negative spiritual experiences may be particularly important in the context of religious changes (e.g., conversion and deconversion), as spiritual struggles may result from such changes, or produce them (Fisher, 2017).

In this project, we conducted a series of three manuscripts investigating the association between religious belief status, gratitude, forgiveness, humility, spiritual struggle, and suicide risk. In our first manuscript, we utilized an analysis of variance (ANOVA) design to compare mean levels of risk (i.e., spiritual struggle) and protective (i.e., gratitude, forgiveness, humility) factors among individuals of four differing religious belief statuses: religious deconverts, religious converts, lifelong religious believers, and lifelong religious non-believers. In our second manuscript, utilizing multiple linear regression modeling, we evaluated the extent to which gratitude, forgiveness, humility, and spiritual struggle are associated with suicide risk for each of the four varying belief statuses. In our final manuscript, we assessed the potential protective (i.e., moderating) effect of gratitude, forgiveness, and humility on the established relation between spiritual struggle and suicide risk, and whether this effect differed across each of the four belief status groups, in independent models.

In the following sections, we review the literature on the epidemiology and etiology of suicide. We then provide a conceptual framework for spiritual struggle as a risk factor for suicide, and for forgiveness, gratitude, and humility as potential protective factors buffering suicide risk. Finally, we conceptualize religion as a potential explanatory mechanism underlying

these protective factors and address how changes in religious belief might affect the associations between spiritual struggle, forgiveness, gratitude, humility, and suicide.

Epidemiology of Suicide

Suicide is a global phenomenon that results in more than 800,000 deaths each year, worldwide (World Health Organization, 2014). In the United States, suicide is the 10th leading cause of death (Heron, 2013), and suicide rates have risen consistently for the past two decades (Centers for Disease Control, 2017).

Some demographic groups are at greater risk for suicide. For instance, suicide risk may differ by sex, age, and race and ethnicity. Males are more than four times as likely to die by suicide than females (Hedegaard et al., 2018), despite a higher rate of suicide attempts among females (Crosby et al., 2011). For males, the highest rate of suicide in 2016 occurred among men aged 75 years and older, followed by those aged 45-64 years, 25-44 years, 65-74 years, and 15-24 years (Hedegaard et al., 2018). For females, the highest rate of suicide in 2016 occurred among those aged 45-64 years, followed by those aged 25-44 years, 65-74 years, 15-24 years, and 75 years or older (Hedegaard et al., 2018). Finally, ethnic differences in U.S. suicide rates also exist, with the highest rates occurring among Whites, followed by American Indians, Asian and Pacific Islanders, and African Americans (Centers for Disease Control, 2017).

In addition to basic demographic risk factors, there are also many biological, socio-cultural, and psychological risk factors for suicide. In the following sections, we offer a brief overview of the etiology of suicide, with an emphasis on the cognitive, emotional and behavioral factors that comprise religious belief systems and religious/spiritual coping.

Biological Risk Factors for Suicide

Research on biological risk factors for suicide has underscored the role of various neurotransmitters, most notably serotonin, norepinephrine, and dopamine. An abundance of research points to dysfunction in the serotonin transporter (5-HTT), typically manifesting as abnormally low serotonin, as a significant distal risk factor for suicide (Li & He, 2007). Recent evidence points to the expression of the SLC6A4 gene, which encodes 5-HTT, as a potential biomarker for suicide risk. For example, in a sample of male suicide attempters, Bah and colleagues (2008) found that polymorphisms of the SLC6A4 gene affect the availability of 5-HTT. Building upon this, Consoloni and colleagues (2018) found that SLC6A4 expression remains stable in healthy control participants, while fluctuations in SLC6A4 expression across an 8-week follow-up predicted suicide attempts in individuals diagnosed with a Major Depressive Episode.

Polymorphisms of the norepinephrine transporter (SLC6A2) are also associated with suicide risk (Kim et al., 2014). Norepinephrine, also known as noradrenaline, is a neurochemical involved in the stress-response system of the brain, and greater levels of norepinephrine are present in individuals who have attempted suicide, particularly those who have experienced significant life stressors (Sunnqvist et al., 2008). For example, in a study of clinical patients diagnosed with Major Depressive Disorder, suicide was associated with reduced binding of nisoxetine, a selective norepinephrine re-uptake inhibitor, to the norepinephrine transporter in the midcaudal region of the locus coeruleus (Klimek et al., 1997). Further, lower concentration of 3-methoxy-4-hydroxyphenylglycol, a metabolite of norepinephrine, in the cerebral spinal fluid has been associated with suicide risk among depressed patients (Agren & Niklasson, 1986; Galfalvy et al., 2009) and individuals in the justice system (Virkkunen et al., 1989).

Finally, dopamine is also implicated in suicide. In a study by Fitzgerald and colleagues (2017), an uneven ratio of dopamine binding at the D1 receptor, compared to the D2 receptor, differentiated individuals who died by suicide from a control group. Similarly, in a study of potential differences in dopamine receptor sites between suicide attempters and healthy controls, by Suda and colleagues (2009), polymorphisms of the D2 receptor were more common among suicide attempters. Finally, in a study comparing 26 male suicide attempters and 26 males with depression but no history of suicide attempt, Pitchot and colleagues (2001) found that D2 receptor dysfunction was present among depressed patients with a history of suicide attempt, but not depressed patients without suicide attempts.

Yet, although understanding biological antecedents of suicide may contribute to reduced risk via development of neurologic or pharmacological interventions, a comprehensive understanding of suicide necessitates inclusion of the social, environmental, cultural and psychological precipitants of suicide. Such risk factors often accompany, contribute to or develop from biological vulnerabilities, thereby exacerbating suicide risk (Mann & Currier, 2016).

Socio-cultural and Environmental Risk Factors for Suicide

Much of the theoretical and empirical work focused on suicide has emphasized its socio-cultural and environmental precipitants (e.g., Joiner, 2005; Lew et al., 2019). The Interpersonal Theory of Suicide (IPT), for example, is among the most well-known theories of suicide and posits that susceptibility for suicide is highest when three psychosocial constructs are present, including perceived burdensomeness, thwarted belongingness and acquired capability (Joiner, 2005; Van Orden et al., 2010). Perceived burdensomeness is the degree to which an individual feels they are a burden to those around them and may develop from, or be exacerbated by, life

circumstances that promote perceptions of being a burden (e.g., unemployment, physical illness, incarceration; Van Orden et al., 2010). Thwarted belongingness describes the unmet need to belong to a social group and reflects a similarity to Durkheim's (1897) integration theory which, as we have noted, suggests that religion promotes socialization, thereby resolving thwarted belongingness. Finally, the IPT suggests that acquired capability is a necessary element of suicide and posits that humans are not born with the capability of engaging in lethal suicide but, rather, that this capability is acquired through painful and excruciating experiences (e.g., childhood abuse, war, sudden loss of a loved one). Broadly, the IPT suggests that while thwarted belongingness and perceived burdensomeness produce suicidal desire, suicidal behaviors and attempts only occur once an individual has acquired a capability for suicide. The IPT of suicide has gained extensive support, with confirmation of these proposed associations among college students (Kyron et al., 2019), a community sample of depressed individuals (Rogers & Joiner, 2019), Latina adolescents from low-income families (Gulbas et al., 2019), and in a meta-analysis examining data from community-dwelling adults, military veterans, undergraduate students, and clinical patients (Chu et al., 2017).

Socio-economic factors are also robustly associated with suicide risk. For instance, unemployment is associated with suicide risk among cross-national community samples (Nordt et al., 2015). Similarly, although conflicting results have been reported (Pompili et al., 2013), most research indicates an association between lower educational attainment and suicide risk among the general population (Crosby et al., 2011; Phillips & Hempstead, 2017). Poverty also serves as a unique predictor of suicide risk for both adolescents and adults from the general population (Fang, 2018; Thompson et al., 2017), and homelessness is associated with increased rates of suicidal behavior, with as many as 28 percent of homeless men and 57 percent of

homeless women reporting a history of suicide attempt (Eynan et al., 2002). Of note, religiosity has been found to buffer the association between unemployment (Lechner & Leopold, 2015), homelessness (Wendt et al., 2017), and low income (Gebauer et al., 2013) and poor psychological outcomes (e.g., poor psychological adjustment, alcohol problems, low life satisfaction) among community members in Germany, U.S. community members, and a cross-national sample of community members, respectively.

Finally, macro-level environmental factors play a role in the development of suicide ideation and attempts. For example, disproportionate rates of suicide exist between rural and urban locales, globally. In a review of the literature focused on rurality and suicide, Hirsch and Cukrowicz (2014) highlight factors associated with rural suicide, including, among others, lack of access to health care, exposure to occupational devastations (e.g., flooding and droughts, climate change) resulting in economic hardship, and geographic and interpersonal isolation.

Rural inhabitants may also share common risk factors with individuals from urban areas. For example, lack of autonomy and satisfaction at work are associated with suicide risk among a nationally representative sample of adults from the U.S. (Howard & Krannitz, 2017). For adolescents in the general population, cyber and school bullying (Zaborskis et al., 2019), and peer and family invalidation (Yen et al., 2015), are both associated with suicide risk. On the other hand, parental involvement, and an adaptive school climate (e.g., social support, perceived safety), may mitigate the deleterious impact of bullying on suicide risk, as evidenced in a sample of Asian American middle school students (Wang et al., 2018).

Although such linkages between socio-cultural and environmental factors and suicide are evident, the extant literature suggests that these factors influence suicide risk due, in large part, to their tendency to produce changes in psychological functioning. As such, understanding the

psychological precipitants of suicide is a necessary step in developing a comprehensive understanding of the social, cultural, and environmental risk factors for suicide.

Psychological and Psychopathological Risk Factors for Suicide

Psychological and psychopathological factors are among the most robust predictors of suicide. For example, in a comprehensive meta-analysis of mental illness and suicide, Harris and Barraclough (2008) found an increased risk of suicide associated with at least 36 out of 44 mental disorders, with bipolar disorder, major depression, and anorexia nervosa ranking among some of the strongest predictors of suicide. Moreover, the prevalence of depression has risen over recent decades (Weinberger et al., 2018), perhaps accounting for the consistent rise in suicide rates (Twenge et al., 2019). Currently, anxiety disorders are the most diagnosed mental health disorders in the U.S., with a 12-month prevalence of approximately 18 percent of the general population, followed by mood disorders (9.5%), impulse control disorders (8.9%), and substance use disorders (3.8%; Kessler et al., 2005).

Both theory and research suggest that the association between mental illness and suicide may be due, in part, to underlying common factors of mental illness. For example, affective states such as hopelessness are a common feature of mental disorders that diminish well-being (Schauman et al., 2017) and increase risk of suicide (Brown et al., 2000), perhaps by fostering a sense that one's situation is inescapable. Similarly, psychache, a deeply rooted "hurt, anguish, soreness, aching, psychological pain in the psyche, the mind," (Shneidman, 1993; p. 51) is a construct theorized to be the sole cause of suicide (Shneidman, 1993, 1996, 2004), and this association has been found in psychiatric outpatients (Berlim et al., 2003), undergraduate students (Montemarano et al., 2018), and a community sample (Hall et al., 2020).

Mental disorders and suicide may also be associated due to underlying cognitive processes. For example, previous research indicates that self-regulation, as a process of executive functioning, may inhibit the development of mental illness. Indeed, deficits in self-regulation are related to a wide range of psychopathology including attention deficit hyperactivity disorder, mood disorders, obsessive-compulsive disorder, addiction, schizophrenia, eating disorders, and personality disorders (Nigg, 2017). Moreover, deficits in self-regulation, specifically emotion-regulation, have been linked to suicide risk among psychiatric inpatients (Martin et al., 2017), patients with borderline personality disorder (Blasczyk-Schiep et al., 2018), and Hungarian children with depression (Tamás et al., 2007). As previously mentioned, the association between religion and suicide has also been attributed, in part, to self-regulation, which may be an important factor linking religious belief, psychopathology, and suicide.

What is evident from our review of the literature on biological, environmental, and psychological risk factors is that suicide is complex in nature and requires ongoing investigation of etiology and treatment, including gaining a better understanding of which aspects of suicide are most malleable to therapeutic intervention. Traditionally, interventions have focused on the amelioration of risk factors, including spiritual struggle. For example, spiritually oriented psychotherapies (e.g., religious cognitive behavior therapy, spiritually oriented trauma-focused cognitive behavior therapy) have proven effective at reducing spiritual struggles (Pearce & Koenig, 2016). In the following section, we discuss the conceptual roots of spiritual struggle and review the extant literature on spiritual struggle and suicide.

Spiritual Struggle

At times, the relationship a person has with God or a deity can be troubled, contentious, doubtful or fearful, and may contribute to spiritual or religious distress, in a process termed

spiritual struggle. Spiritual struggle can be defined as an experience "when some aspect of religious belief, practice or experience becomes a focus of negative thoughts or emotions, concern or conflict" (Exline et al., 2014; p. 208). In their conceptual overview, Exline and Rose (2005) highlight four main categories of spiritual struggle, including suffering, virtuous striving, supernatural evil, and social strain. Suffering, as a universal experience, may be characterized as a spiritual struggle when responsibility for the suffering is attributed to God. Such attributions may manifest as anger, lack of trust, or other negative emotions directed toward God. Virtuous striving can be characterized as a spiritual struggle when one falls short of the moral standards set by their religious or spiritual doctrines and may manifest as guilt or shame or a striving to adhere more closely to their moral standards. The supernatural evil subtype of spiritual struggle is characterized by the attribution of negative life circumstances to a spiritual antagonist (e.g., Satan, the devil, demons). Finally, social strain is an aspect of spiritual struggle characterized by interpersonal struggles within a religious context, such as feeling abandoned or hurt by one's faith community, or feeling rejected, misunderstood, or mistreated by religious or spiritual people.

Importantly, spiritual struggle is an experience shared by all religious orientations and belief statuses, though the prevalence of spiritual struggle may be higher among religious believers (Exline et al., 2016). Moreover, spiritual struggle may play a role in one's self-identification as religious or non-religious. For example, spiritual struggle in the form of intellectual doubting or social strain (Exline & Rose, 2005) may be related to deconversion from, or opposition to, one's current or previous religious beliefs (Fisher, 2017). Alternatively, spiritual struggle in the form of virtuous striving or belief in supernatural evil may enhance one's religious beliefs and motivate a stricter adherence to those beliefs (Exline & Rose, 2005).

Although the term spiritual struggle emerged shortly after the start of this century, the notion of spiritually and religiously related distress has an extensive history in the academic literature. For instance, an abundance of research has focused on the topic of negative religious coping, defined as "an expression of a less secure relationship with God, a tenuous and ominous view of the world, and a religious struggle in the search for significance" (Pargament et al., 1998, p. 712). Much of the work regarding negative religious coping, spiritual struggles, and related concepts (e.g., religious doubting, spiritual strain, religious conflict) has focused on the association between spiritually related distress and health-related functioning, including suicide. In the following section, we review the literature on spiritual struggle and health-related outcomes, including suicide risk.

Spiritual Struggle, Health, and Suicide

Although empirical investigation of the linkage between spiritual struggle and physical health is lacking, research on maladaptive aspects of religion and spirituality suggest a potential deleterious impact. For example, negative religious coping is associated with poorer health-related quality of life (e.g., overall health functioning, health worries, medication concerns) among religious individuals with HIV in Malaysia (Siah & Tan, 2016). Similarly, among female victims of intimate partner violence in Israel, negative religious coping was associated with perceived poor health (Abu-Raiya et al., 2017). In a longitudinal study, Pargament et al. (2004) found that negative religious coping was inversely related to health functioning (i.e., activities of daily living) among older adults with medical illness, noting that this association may be limited to individuals with chronic negative religious coping (i.e., high negative religious coping at baseline and two-year follow-up).

Regarding the relatively new concept of spiritual struggle, as assessed by the Religious and Spiritual Struggles Scale, only three known studies have investigated its association with health-related outcomes. Using data from the Landmark Spirituality and Health Survey, a national study of general U.S. population, Krause and colleagues found that higher levels of spiritual struggle are associated with a greater number of self-reported symptoms of physical illness (Krause, Pargament, Hill, & Ironson, 2017; Krause, Pargament, Hill et al., 2017; Krause, Pargament, & Ironson, 2017).

The linkage between spiritual struggle and poorer psychological well-being, has been more extensively studied. For example, in a community-based study by Ellison and Lee (2010), spiritual struggle was associated with psychological distress. Similarly, multiple studies have confirmed the relation between spiritual struggle and depressive symptoms among a community sample of African Americans (Park et al., 2018), parents of children with cystic fibrosis (Szczesniak et al., 2017), and a community adult sample (Abu-Raiya et al., 2016; Abu-Raiya et al., 2015). Spiritual struggle is also associated with the presence of mood disorders, more generally, including depressive and manic episodes among geriatric patients, and regardless of one's religious belief status (Rosmarin et al., 2014). Finally, spiritual distress is associated with poor psychological adjustment to stressful life events (Ano & Vasconcelles, 2005) and predicted depression following stressful situations, for undergraduate students with high religious commitment (Ahles et al., 2016).

Spiritual distress is also related to increased risk for suicide. For example, religious fear and guilt related to the commission of sin is associated with suicide among college students (Exline et al., 2000; Johnson & Hayes, 2003). Negative religious coping is associated with suicide among Iraq and Afghanistan veterans, after covarying depression and PTSD

symptomology (i.e., Post-traumatic Stress Disorder Checklist – Civilian Version; Currier et al., 2017), and these results have been confirmed among combat veterans using the newly developed religious and spiritual struggles scale (Raines et al., 2017). The link between spiritual struggle and suicide risk has also been observed among psychiatric patients with psychosis (Rosmarin et al., 2014), and among patients with advanced cancer while controlling for demographics, mental and physical illness, social support, and general religiosity (Trevino et al., 2014).

Overall, our review of the literature indicates that the association between spiritual struggle and health-related outcomes, including suicide, is well-established. Such empirical investigations represent the traditional approach to suicide research and prevention, which is the identification of risk factors for suicide; however, alternative approaches, including positive psychological approaches, provide a promising avenue for addressing suicide risk and may be particularly relevant in the context of religion. As previously discussed, the relation between religion and suicide has often been theoretically and empirically attributed to self-regulation (McCullough & Willoughby, 2009; Wood, 2017), a cognitive process also proposed to underlie the expression of positive psychological virtues (Root Luna et al., 2017). As such, the integration of the psychology of religion and positive psychology is a novel approach to suicide research with potential implications for prevention and intervention. In the extant literature, forgiveness, gratitude, and humility are three positive psychological constructs often linked to religion (Krause, 2018; Krause & Hayward, 2015). In the remainder of the chapter, we highlight the theoretical and empirical foundations linking these virtues to religion and to health-related outcomes, including suicide.

Forgiveness

Forgiveness has been frequently investigated as a contributor to well-being, although its conceptual clarity has been weakened by the utilization of numerous definitions and measurement tools (e.g., Lawler-Row et al., 2007; Webb et al., 2017; Worthington et al., 2018). Worthington (2001) defines forgiveness as "the emotional replacement of (1) hot emotions of anger or fear that follow a perceived hurt or offense, or (2) unforgiveness that follows ruminating about the transgression, by substituting positive emotions such as unselfish love, empathy, compassion, or even romantic love'' (p. 32). Although there is little consensus on an accurate definition of forgiveness, Worthington (2007) notes that most researchers agree on what forgiveness is not: "forgiveness is not to be confused with excusing, exonerating, justifying, condoning, pardoning, or reconciling" (p. 557). Alternative conceptualizations highlight forgiveness as both an intrapersonal process (e.g., giving up a grudge) and interpersonal process (e.g., pro-social changes in one's relationship with and perception of the perpetrator; Worthington, 2007).

Research on forgiveness highlights its various dimensions, including forgiveness of God and feeling forgiven by God, with self-forgiveness and forgiveness of others being most frequently studied (e.g., Dangel et al., 2018; Hall et al., 2018; Nsamenang et al., 2013; Webb et al., 2017). Further, forgiveness is often studied in the context of religion (Cooper et al., 2018; Hall et al., 2018; Krause, 2017, 2018), as it is a central tenant of most mainstream religions (Webb et al., 2012), particularly forgiveness of others (e.g., Colossians 3:13, Quran 42:40, Bhagavad Gita 13:7; see also Webb et al., 2012). Thus, we focus solely on forgiveness of others, and, henceforth, use the term forgiveness to reference forgiveness of others.

Following a surge of research linking religion with one's propensity to forgive (e.g., Gorsuch & Hao, 1993; Mullet et al., 2003), various theoretical explanations have emerged to explain the mechanisms of this association. Most recently, Escher (2013) proposed a conceptual model whereby "a person who has internalized a belief system in which forgiveness is a moral necessity, is socialized into forgiving practices, and has internalized other beliefs and practices that facilitate forgiveness will likely have a propensity to forgive" (p. 103). Such internalized beliefs are proposed to be socially inculcated by religious leaders, family and peers, and religious texts, primarily during adolescence. As such, Escher hypothesizes that adolescent religious affiliation is associated with a greater propensity to forgive in adulthood and, further, that individuals affiliated with religion in adolescence who later deconvert, lose their investment in the religious practices and beliefs that promote forgiveness and, thus, experience decreases in their propensity to forgive. Escher's hypotheses were confirmed among a nationally representative community sample; that is, religious affiliation during adolescence is associated with forgiveness in adulthood for those who maintain their religious beliefs, but not for those who deconvert, suggesting that deconversion may have a deleterious impact on propensity to forgive (Escher, 2013).

Understanding religion as an etiological source for the development of forgiveness is important for understanding forgiveness' effect on health and well-being, as much of the literature linking forgiveness to health also highlights the role of religion and spirituality. Moreover, the literature on forgiveness and health reveals a robust association between forgiveness and health, well-being, and suicide, highlighting its potential as a target for interventions.

Forgiveness, Health, and Suicide

As the field of positive psychology has developed, forgiveness has been at the forefront of the empirical investigation of positive psychological factors and health. For example, in a recent meta-analysis of 128 studies of the association between forgiveness and physical health, Lee and Enright (2019) found that the average effect of forgiveness on health was significant, providing extensive support for the salubrious effect of forgiveness on health. Among the health benefits of forgiveness are reduced heart rate and blood pressure, and less medication use, among undergraduate students (Lawler-Row et al., 2008), and lower all-cause mortality among community adults (Toussaint et al., 2012).

To explain such findings, Lavelock and colleagues (2015) propose three mechanisms by which forgiveness is associated with health. First, forgiveness is a pro-social act that helps to maintain social support, resulting in better physical health. Second, forgiveness helps to regulate physiological responses indicative of poor health (e.g., blood pressure, heart rate, immune functioning). Finally, forgiveness plays a role in reducing negative affect (see also Lawler et al., 2005), underscoring the importance of forgiveness in regulating mental health, which is more closely associated with suicide.

Indeed, the association between forgiveness, mental health and well-being has been widely reported. For example, in previous research with undergraduates and young adults, forgiveness is negatively associated with aggression (Ross et al., 2007), hostility (Ross et al., 2004), neuroticism, fear, and vengeful rumination (Berry et al., 2005). Additionally, it is well-documented that greater forgiveness is associated with less depression, including among college students (Hirsch et al., 2011), Korean college teachers (Chung, 2016), elderly adults (Dezutter et al., 2016), and postnatal women (Ripley et al., 2018). Forgiveness is also negatively associated

with a variety of other psychopathologies including anxiety (Rowell et al., 2019), substance use (Webb et al., 2011), and PTSD (Karaırmak & Güloğlu, 2014). Moreover, in a longitudinal and community-based study by Toussaint et al. (2016), forgiveness was predictive of fewer perceptions of stress and fewer mental health complaints (e.g., sadness). Such beneficial effects are also evident when forgiveness-based interventions are utilized. For example, in a recent meta-analysis, forgiveness interventions were effective at reducing depressive symptoms, anger and hostility, and perceived stress (Akhtar & Barlow, 2018). Thus, the extant literature suggests that forgiveness, and interventions to promote forgiveness, may be important for reducing symptoms of psychopathology and, as we note below, may help to ameliorate risk of suicide, as psychopathology has been found to mediate the relation between forgiveness and suicide.

Webb et al. (2015) proposed a theoretical linkage between forgiveness and suicide risk, whereby forgiveness, as a function of spirituality, is both directly related to decreased suicide risk and indirectly related to suicide risk via the mediating variables of health-related functioning and psychological distress. This theorized linkage between forgiveness and suicide risk has been empirically supported. For example, in a clinical sample, Sansone et al. (2013) found an association between lower levels of forgiveness and a past suicide attempt and, similarly, lower levels of forgiveness were associated with suicide risk in a sample of veterans with PTSD (Kopacz et al., 2016). Evidence for the indirect effect of forgiveness on suicide risk has also been documented. Among college students, Hirsch and colleagues (2011) found that depressive symptoms mediated the association between forgiveness and suicide risk, such that forgiveness was related to less depression and, in turn, to less suicide risk. Similarly, in a study of college students, cynicism and psychache were significant mediators of the association between

forgiveness and suicide risk (Dangel et al., 2018), as was future orientation in a sample of primary care patients (Kelliher Rabon et al., 2019).

The growing body of research highlighting the beneficial effects of forgiveness, in concert with the rapid development of the field of positive psychology, has brought about the investigation of positive psychological constructs related to, yet distinct from, forgiveness. For instance, a significant amount of work on forgiveness has also incorporated the construct of gratitude (e.g., Charzyńska, 2015; Satici et al., 2014; Wilks et al., 2015), which exerts similar beneficial effects on health, including reduced suicide risk. Much of the work on gratitude has also considered the relevance of religion for the development of gratitude (e.g., Sharma & Singh, 2019), although no research, to date, has investigated the potential effects of religious belief status (i.e., conversion or deconversion) on the development and expression of gratitude.

Gratitude

Gratitude, or thankfulness, is conceptualized as an affective trait that reflects “a generalized tendency to recognize and respond with grateful emotion to the roles of other people’s benevolence in the positive experiences and outcomes that one obtains” (McCullough et al., p. 112). McCullough and colleagues refer to this trait as the grateful disposition and highlight four facets of gratitude, including intensity, frequency, span, and density. The intensity of gratitude refers to the strength of the feelings of grateful emotion, whereas the frequency of gratitude refers to the number of explicit experiences of positive, grateful emotions. The span of gratitude refers to the “number of life circumstances for which a person feels grateful at a given time” (p.113). That is, a grateful individual is expected to experience gratitude related to a greater number of life domains (e.g., family, job, friends). Finally, the density of gratitude refers to the number of individuals to which a person feels grateful in response to a single positive

outcome. McCullough and colleagues suggest that individuals high in dispositional gratitude will experience greater levels of each facet of gratitude.

Gratitude has also been conceptualized as a moral emotion, or moral affect (Haidt, 2009), theorized to regulate human responses to altruism and promote reciprocal altruism (Trivers, 1971). Mccullough et al. (2001) highlight three ways in which gratitude operates as a moral affect. First, they propose that gratitude serves as a moral barometer and suggest that it is "an affective readout that is sensitive to a particular type of change in one's social relationships - the provision of a benefit by another moral agent that enhances one's well-being" (p. 252). Second, they theorize that gratitude serves as a moral motive. For example, an individual who experiences gratitude is more likely to act toward the benefit of the individual to whom they are grateful. Lastly, gratitude is theorized to act as a moral reinforcer, reinforcing the moral behavior of the recipient of gratitude and increasing the likelihood that they will engage in moral acts in the future.

Conceptualized as a moral affect, gratitude is proposed to be a central component of many religious traditions (Emmons & Crumpler, 2000; Lavelock et al., 2016), as evident in religious texts (e.g., Quran 31:12, Colossians 3:15 – 17). Theories of gratitude also underscore the relation between gratitude and religion. Wirtz et al. (2014) propose that gratitude requires both *noticing* and *appreciating*. Further, they suggest that noticing aligns with the concept of mindfulness, which religion promotes through rituals and practices such as prayer and meditation. Indeed, prayer was associated with increased gratitude, in longitudinal studies involving undergraduates (Lambert et al., 2009). Gratitude is also associated with church attendance, reading the bible and spiritual transcendence (i.e., purpose in life, integration into a larger faith community, enjoyment experienced from prayer; Emmons & Kneezel, 2005).

Finally, higher levels of gratitude are associated with general religiosity among undergraduate students (Mccullough et al., 2004). Thus, there is evidence to suggest that levels of gratitude may differ across religious belief statuses, with religious believers exhibiting the highest levels of gratitude.

Theories of gratitude have expanded to account for the positive effects that gratitude has on health and well-being. For example, Lavelock and colleagues (2016) presented a comprehensive, integrative model of gratitude and health which posits that gratitude is influenced by individual differences (e.g., religion/spirituality, personality), positive and negative events (e.g., receiving gifts, loss of a loved one), and explicit interventions aimed at increasing gratitude (e.g., gratitude log). Further, the model suggests three mechanisms through which gratitude benefits health. First, gratitude beneficially influences mental health outcomes (e.g., positive affect, reduced depressive symptoms), which, in turn, results in better physical health.

Second, gratitude promotes adaptive health behaviors (e.g., self-care, help-seeking behavior), resulting in better physical health. Finally, gratitude contributes to better social outcomes, such as social support, thereby contributing to better health. In the following section, we discuss the associations between gratitude, physical and mental health, and suicide risk.

Gratitude, Health, and Suicide

A growing body of research supports the beneficial effects of gratitude on physical and mental health. For example, in a study of Swiss adults ($N = 962$) by Hill et al. (2013), gratitude was associated with better self-rated health (i.e., Short-Form 12 Health Survey) and, similarly, in a study of middle school students ($N = 154$), gratitude was negatively associated with somatic symptoms (e.g., appetite disturbance, headaches, muscle pain, nausea; Froh et al., 2009). Among a sample of older community adults, gratitude was associated with better self-perceived health,

and this effect was associated with church attendance such that older adults who attend church were more likely to express gratitude, and, in turn, report better perceived health (Krause & Hayward, 2014). Relatedly, a perception of God as benevolent was associated with higher levels of gratitude and, in turn, to fewer physical symptoms and better self-rated health in a national community sample (Krause et al., 2015). Finally, in a study of patients with asymptomatic heart failure, gratitude was associated with less fatigue, better sleep quality, and lower levels of inflammatory biomarkers (Mills et al., 2015).

Previous research also suggests that gratitude has a beneficial association with mental health outcomes. For example, in a study of Iranian soldiers, Valikhani et al. (2019), found a significant association between gratitude and better mental health (e.g., fewer depressive symptoms), mediated by stress, such that higher levels of gratitude were related to less perceived stress and, in turn, to better self-reported mental health. Similarly, in a longitudinal study by Sirois and Wood (2017), gratitude predicted fewer depressive symptoms among individuals with arthritis and inflammatory bowel disease. In a longitudinal, cross-national study of community-member participants ($N = 797$), gratitude predicted lower levels of depression at 3-month and 6-month follow-up, and this effect was mediated by perceptions of positive life events, such that higher levels of gratitude were linked to more perceptions of positive life events and, in turn, to less depression (Disabato et al., 2017). Finally, in the context of religion, gratitude, along with altruism, mediates the association between religiosity and general well-being such that religiosity is associated with higher levels of gratitude and, in turn, to greater altruism and general well-being (Sharma & Singh, 2019).

Of importance to our study, the benefits of gratitude also extend to the association between poor mental health (e.g., depression, hopelessness) and suicide, including among

undergraduate students (Kleiman et al., 2013a). Like forgiveness, gratitude is proposed to positively impact suicide risk, both directly and indirectly. For example, in a study of Chinese adolescents ($N = 1252$), gratitude was directly associated with past suicidal ideation and suicide attempts and, further, self-esteem mediated the relation between gratitude and suicide risk (Li et al., 2012). Similarly, in a longitudinal study of college students by Kleiman et al. (2013b), gratitude was associated with less suicidal ideation, and this linkage was mediated by meaning in life, such that greater gratitude was related to higher levels of meaningfulness and, in turn, to less suicide risk. Finally, in a study of college students by Kleiman et al. (2013a), gratitude was a moderator of the association between hopelessness, depressive symptoms, and suicide ideation and intent, indicating its role as a buffer of suicide risk.

Overall, the burgeoning literature on gratitude makes evident the benefits it confers on physical and mental health functioning and, further, suggests that gratitude may help facilitate the development of other virtues that have similar beneficial effects on health and well-being, including suicide. For example, humility is a positive psychological construct, with religious roots (Van Tongeren et al., 2017), shown to be closely associated with, and influenced by, gratitude (Kruse et al., 2014). As such, humility may be another important factor to consider as a positive psychological approach to suicide prevention, particularly in the context of religiousness.

Humility

Broadly, humility is defined as a position toward others that is other-oriented rather than self-focused, marked by respect and an ability to restrain egoistic motives (Davis et al., 2011; Hook & Davis, 2014). Offering further clarification, Haggard and colleagues (2018) note the scientific agreement that humility is not arrogance, narcissism, self-deprecation, low self-esteem,

or modesty. Barrett (2017) highlights three conceptual aspects of humility. First, humility involves the acknowledgement of one's own intellectual limitations. Second, humility requires a lack of concern with the degree to which one's intellect affects their social status. Lastly, humility is a virtue that occupies the space on the spectrum between "intellectual arrogance and intellectual diffidence" (p. 1). Leary and colleagues (2017) offer a comprehensive definition of intellectual humility as "recognizing that a particular personal belief may be fallible, accompanied by an appropriate attentiveness to limitations in the evidentiary basis of that belief and to one's own limitations in obtaining and evaluating relevant information" (p. 793). They note that high intellectual humility often manifests as a lack of rigidity and conceit regarding one's personal beliefs and an openness to the opinions and beliefs of others, whereas low intellectual humility may manifest as an unsubstantiated insistence on the accuracy of one's personal beliefs while disregarding opposing views from others.

Humility is often considered a virtue in religious traditions due to religion's emphasis on "the notion of a higher, greater power and the implication that, although we may have considerable wisdom and knowledge, there always are limits to our perspective" (Tangney, 2009, p. 412). The religious value of humility is evident in religious texts (e.g., Proverbs 15:33, Matthew 23:12, Quran 25:63, Bhagavad Gita 13:08), and in ritualistic practices such as prostrating or kneeling for prayer. Importantly, such practices are not intended as an act of self-deprecation but, rather, as an acknowledgement of, and reverence to, the sacred (Woodruff et al., 2014). Previous research supports the notion that religious individuals tend to be more humble than non-religious believers, including among undergraduates from Iran (Aghababaei, 2014), Poland, Malaysia (Aghababaei et al., 2016), and the U.S. (Aghababaei et al., 2014). Yet, little is known about how changes in religious belief (e.g., conversion, deconversion) might affect

humility. Hui and colleagues (2018) suggest, for instance, that deconversion is characterized by self-enhancement values, which conflict with the religious values of humility and self-sacrifice, and which may reduce humility. Thus, changes in religious beliefs may have a critical impact on the development or deterioration of humility.

While ongoing research continues to clarify the link between humility and religion, the practical implications of humility, including for health and well-being, have gained increased attention in the academic literature. As we discuss below, such research provides promise for the use of humility in positive psychological interventions to improve physical and mental health, including reduction of suicide risk.

Humility, Health, and Suicide

Only minimal research has been conducted assessing the association between humility and physical health. To begin, in a study of college students by Rowatt and colleagues (2006), humility was significantly, positively associated with better general health. Similarly, Krause (2010) reported a positive correlation between humility and self-rated health (i.e., rated as poor, fair, good, or excellent) among a national sample of older adults. In a longitudinal study of older adults, changes in humility over time were associated with changes in self-reported health (i.e., participants compared their health to others their age and rated their satisfaction with their health; Krause, 2012). More recently, Krause (2018) provided evidence for the indirect association between humility and self-rated health via forgiveness and meaning in life, among a national community sample. Research on constructs related to humility may also provide support for the humility-health linkage. For example, narcissism (i.e., feelings of entitlement, self-importance, and superiority) is a characteristic inversely related to humility (Sandage et al., 2016) that has been positively associated with substance misuse among college students (Hill, 2016) and

negatively associated with positive attitudes toward health behaviors among high school students (Kalliopuska, 1992).

The beneficial association between humility and mental health has been more widely documented in the extant literature. For example, in a study of college students by Jankowski et al. (2013), humility was negatively associated with depressive symptoms and mediated the relation between forgiveness and depressive symptoms. In a study of religious believers, humility was negatively related to depressed affect and moderated the relation between negative social interactions in the church and depressed affect (Krause, 2014). Similarly, in a study of multiracial respondents, humility was associated with fewer depressive symptoms (Franco & McElroy-Heltzel, 2019) and, in a large, national survey by Krause et al. (2016), humility attenuated the association between stressful life events and happiness, depressed affect, satisfaction with life, and symptoms of anxiety.

Such effects suggest that humility may also be protective against suicide risk, although this association has not been investigated. Yet, related research facilitates this inference. For example, narcissism is associated with suicidal ideation among Chinese and German college students, an effect mediated by depressive symptoms (Brailovskaia et al., 2019). Similarly, narcissistic personality traits are associated with elevated suicide risk among geriatric patients with depression (Heisel et al., 2007), and with suicidal ideation among adult mental health outpatients (Jaksic et al., 2017). The association between narcissistic traits and suicide has been attributed to deficits in self-regulation (e.g., emotion regulation) that are characteristic of narcissism (Hoskins & Goldberg, 2009). In contrast, humility is positively associated with self-regulation (Jankowski & Sandage, 2018), supporting its potential to protect against suicide.

Moreover, self-regulation as an underlying mechanism of humility may further explain the relation between religion, humility, and suicide.

In sum, previous research has identified potential mechanisms underlying the development of forgiveness, gratitude, and humility, and suggests that religiousness is a primary contributing factor. Therefore, changes in religiousness may have significant implications for the development and expression of forgiveness, gratitude, and humility. Further, we propose that Escher's (2013) theory of the socialization of forgiveness can be applied to the development of both gratitude and humility. As characteristics emphasized in mainstream religions, gratitude and humility may develop through the socialization of religious adherents by religious leaders, parents and peers, and religious texts and teachings, particularly during adolescence (Escher, 2013). Further, as Escher suggests, if an individual deconverts from the religion, religious values may decline. Similarly, it is reasonable to suggest that, for an individual who converts to a religion after the critical socialization period (i.e., adolescence), these religious virtues may not be as embedded and, thus, may be expressed to a lesser degree than by a life-long religious adherent.

Statement of the Problem

Suicide is a growing public health problem, warranting research on risk and protective factors. The extant literature indicates that religion and spirituality are robust, direct predictors of suicide risk, often beneficially but sometimes detrimentally. Further, previous research suggests that religion and spirituality may exert their positive effects on health and well-being via their impact on positive psychological factors including forgiveness, gratitude, and humility. Finally, these assumptions have not been investigated in an integrative model, nor across individuals from varying religious backgrounds and beliefs.

Our project addresses these gaps in the literature by assessing the interrelations between spiritual struggle, positive psychological factors, and suicide risk, in former religious believers who no longer believe, former religious non-believers who now believe, never believers, and always believers. We conducted a series of three manuscripts to assess all proposed models, meeting the requirements for the alternative dissertation format as described by the ETSU School of Graduate Studies. In the first manuscript, we examined the degree to which levels of forgiveness, gratitude, humility, and spiritual struggle differ across religious belief status. In the second manuscript, we assessed the role of forgiveness, gratitude, humility, and spiritual struggle in predicting suicide risk, and whether these associations differed across religious belief status. Finally, in the third manuscript, we examined the moderating role of forgiveness, gratitude, and humility in the link between spiritual struggle and suicide risk, and whether this effect was moderated by religious belief status (i.e., moderated moderation).

Hypotheses

Manuscript 1 – Religious Virtues and Spiritual Struggles across Religious Backgrounds and Beliefs

1.) At the bivariate level, we hypothesized that forgiveness, gratitude, and humility would be positively associated, and that each would be negatively associated with spiritual struggle.

2.) At the multivariate level, we hypothesized that levels of forgiveness, gratitude, humility, and spirituality struggle would statistically significantly differ based on religious belief status, such that life-long believers would exhibit the highest level of these characteristics followed by religious converts, religious deconverts, and life-long non-believers.

Manuscript 2 – Religious and Spiritual Predictors of Suicide Risk: Forgiveness, Gratitude, Humility, and Spiritual Struggle.

1.) At the bivariate level, we hypothesized that forgiveness, gratitude, and humility would be positively associated, and that each would be negatively associated with spiritual struggle and suicide risk. We also hypothesized that spiritual struggle and suicide risk would be positively associated.

2.) At the multivariate level, we hypothesized that forgiveness, gratitude, and humility would predict lower levels of suicide risk, and spiritual struggle would predict higher levels of suicide risk. Moreover, we hypothesize that these associations would be stronger for life-long religious believers, followed by religious converts, religious deconverts, and life-long religious non-believers.

Manuscript 3 – Spiritual Struggle and Suicide Risk across Varying Religious Belief Statuses: The Role of Positive Psychological Virtues.

1.) At the bivariate level, we hypothesized that forgiveness, gratitude, and humility would be positively associated, and that each would be negatively associated with spiritual struggle and suicide risk. Spiritual struggle and suicide risk were hypothesized to be positively associated.

2.) At the multivariate level, we hypothesized that spiritual struggle would be significantly associated with suicide risk for all belief statuses, but that this association would be strongest for life-long religious believers, followed by religious converts, religious deconverts, and life-long religious non-believers.

3.) We hypothesized that forgiveness, gratitude, and humility would significantly, independently moderate the relations between spiritual struggle and suicide risk such that

this association is attenuated at higher levels of forgiveness, gratitude, and humility. Moreover, we hypothesized that this protective effect would be strongest for life-long religious believers, followed by religious converts, religious deconverts, and life-long religious believers.

Chapter 2: Methods

This study was funded via a student research grant awarded by the School of Graduate Studies, to the Principal Investigators of the study. Prior to beginning data collection, our study was approved by an Institutional Review Board.

Participants

Participants were recruited using the online crowd-sourcing tool, Mechanical Turk. Mechanical Turk allows for *Requestors* (i.e., researchers) to post *Human Intelligence Tasks* (HITs) to be completed by *Workers* (i.e., participants) for compensation. For our study, a brief description of the survey content and study aims was posted as a HIT for all Mechanical Turk users to access. The HIT provided a link to REDCap, a survey tool where participants accessed a battery of psychosocial surveys. There were no specific requirements for workers to complete the survey. Prior to completing the survey battery, participants provided informed consent, and were informed about confidentiality and the right to withdraw their participation at any time.

Participants were provided with information about national mental health resources and were compensated 2 dollars for their participation, upon completion of the survey. Regarding sample size, Keith (2015) suggests that recruitment of 10-20 participants per predictor variable is sufficient for linear regression models which, for our study, would be 90 - 180 subjects, when accounting for covariates. Moreover, an a priori power analysis, using G*Power version 3, suggested that a maximum sample size needed to detect a small effect size is 180 participants, for our analyses. Participants who did not complete the survey were excluded from all analyses using listwise deletion.

Description of Online Survey

Participants were invited to take an online survey through Mechanical Turk titled "The Intersection of Religion and Positive Psychology: Risk and Protective Factors for Health and Wellbeing." The description of this survey stated, "This task requires a 30 minute to 1 hour survey that includes questions about your religious/spiritual beliefs and practices, your self-rated physical and mental health and health behaviors, and the extent to which you perceive yourself to engage in positive psychological practices."

Measures

Demographic Questionnaire

A basic demographic questionnaire was administered to collect information necessary to characterize respondents, including sex, age, race/ethnicity, education level, religious/spiritual affiliation, and income, among other demographic variables.

Suicidal Behaviors Questionnaire - Revised

Suicide risk was assessed using the Suicidal Behaviors Questionnaire-Revised (SBQ-R; Osman et al., 2001). The SBQ-R includes 4 items that assess lifetime suicide ideation and attempt (i.e., "Have you ever thought about or attempted to kill yourself?"), past year suicide ideation (i.e., "How often have you thought about killing yourself in the past year?"), communication of intent of suicide (i.e., "Have you ever told someone that you were going to commit suicide, or that you might do it?), and likelihood of future suicide attempts (i.e., "How likely is it that you will attempt suicide someday?"). For items 1 through 3, participants respond to items using a 5-point Likert-type scale ranging from 1 to 5, indicating the frequency to which they have engaged in the behavior. For item 4, participants respond using a 7-point Likert-type scale ranging from 0 ("Never) to 6 ("Very likely). Potential scores on the SBQ-R range from 3-

18, and higher scores are indicative of greater suicide risk. A cutoff score of 7 has been suggested as useful for differentiating suicidal from non-suicidal persons, in a non-clinical sample (Osman et al., 2001).

Psychometric investigation of the internal consistency of the SBQ-R has yielded acceptable results (Cronbach's alpha (α) = .76) among samples of psychiatric inpatients, high school students, and college students, and the SBQ-R has successfully distinguished between suicidal and non-suicidal individuals (Osman et al., 2001). The convergent validity of the SBQ-R has been demonstrated via its correlation with hopelessness (Spearman (r) .36, $p < .001$), and the Reasons for Living Inventory ($r = -.48$, $p < .001$) among psychiatric patients (Rueda-Jaimes et al., 2017). Similarly, the SBQ-R was correlated with depression ($r = .33$, $p < .001$) and anxiety ($r = .23$, $p < .001$) among college students (Aloba et al., 2017), and depression ($r = .39$, $p < .001$) and psychache ($r = .53$, $p < .001$) among adult community members (Campos & Holden, 2016).

Heartland Forgiveness Scale

Forgiveness of others was measured using a 6-item subscale of the Heartland Forgiveness Scale (HFS; Thompson et al., 2005). Each item (e.g., "With time I am understanding of others for the mistakes they've made," "I continue to be hard on others who have hurt me") is answered on a 7-point Likert scale ranging from 1 ("almost always false of me") to 7 ("almost always true of me") that indicates the degree to which the item is true for the respondent, with higher scores indicating greater forgiveness of others. The internal consistency for the HFS has ranged from acceptable to good (α = .78 - .81) and acceptable test-retest reliability ($r = .83$) across a 3-week interval among undergraduates (Thompson et al., 2005). The forgiveness of others subscale of the HFS has also demonstrated acceptable internal consistency ($r = .79$), test-retest reliability ($r = .73$), and was positively associated with another measure of forgiveness of others (i.e.,

Multidimensional Forgiveness Inventory, r =.47, $p < .001$) among college students (Thompson et al., 2005).

Gratitude Questionnaire

To assess gratitude, or thankfulness, we utilized the 6-item Gratitude Questionnaire (GQ; Mccullough et al., 2002), which measures dispositional gratitude (e.g., "If I had to list everything that I felt grateful for, it would be a very long list"). Participants rate their agreement with each statement using a 7-point Likert scale, with 1 indicating "strongly disagree" and 7 indicating "strongly agree." Higher scores are indicative of a greater level of dispositional gratitude.

The GQ has demonstrated good internal reliability ($\alpha = .80$) and construct validity, including correlations with optimism ($r = .28$, $p < .001$), happiness ($r = .31$, $p < .001$), agreeableness ($r = .42$, $p <.001$), and extraversion ($r = .11$, $p < .01$), among Taiwanese college students (Chen et al., 2009). In a study of adult community members from China, the GQ also demonstrated satisfactory composite reliability (CR = 0.87), and convergent validity with measures of life satisfaction ($\beta = 0.23$, $p < 0.001$) and affective well-being ($\beta = 0.19$, $p < 0.001$; Kong et al., 2017), among Filipino secondary school students (Valdez et al., 2017), Brazilian undergraduates (Gouveia et al., 2019), and adult community member and high school students from Chile (Langer et al., 2016).

The Comprehensive Intellectual Humility Scale

Humility was measured using the Comprehensive Intellectual Humility Scale (CIHS; Krumrei-Mancuso & Rouse, 2016), which is a 22-item measure consisting of four subscales: 1) independence of intellect and ego, 2) openness to revising one's viewpoint, 3) respect for other's viewpoints, and 4) lack of intellectual overconfidence. Items are rated on a 5-point Likert scale ranging from 1 ("strongly disagree") to 5 ("strongly agree"), with higher scores indicating higher

levels of humility. Example items include “I have at times changed opinions that were important to me, when someone showed me I was wrong” and “I respect that there are ways of making important decisions that are different from the way I make decisions.” The CIHS has demonstrated good internal reliability ($\alpha = .88$; Krumrei-Mancuso, 2018), acceptable test-retest reliability ($r = .75$ and $r = .70$ at 1 month and 3 month intervals, respectively), and construct validity as evidenced by correlations with intellectual openness ($r = .52$, $p < .001$), intellectual arrogance ($r = -.53$, $p < .001$) and other measures of humility (e.g., Landrum’s self-correction humility subscale, $r = .42$, $p < .001$), among a national community sample (Krumrei-Mancuso & Rouse, 2016).

The Religious and Spiritual Struggles Scale

The 26-item Religious and Spiritual Struggles Scale (RSSS; Exline et al., 2014) was used as a measure of spiritual struggle. Participants respond to items (e.g., “Felt as though God had let me down,” “Had conflicts with other people about religious/spiritual matters”) by rating the extent to which they have experienced the given scenario on a 5-point Likert scale ranging from 1 (“not at all”) to 5 (“a great deal”). The RSSS produces an overall score and scores for six subscales including divine struggles, demonic struggles, interpersonal struggles, moral struggles, ultimate meaning, and doubt. Psychometric support for the RSSS includes excellent internal consistency ($\alpha = .91$), and convergent validity including correlations with anger toward God ($r = .49$, $p < .01$) and religious fear and guilt ($r = .55$, $p < .01$), in a sample of community adults from the U.S. (Exline et al., 2014).

Religious Belief Status

Using a single item from the Religious Background and Behaviors Questionnaire (Connors et al., 1996), we categorized respondents into one of four religious/spiritual groups,

including life-long religious believers, life-long religious non-believers, religious deconverts, and religious converts. Participants responded to the question “Have you ever in your life believed in God?” with the following possible responses: “yes, and I still do,” “yes, in the past but not now,” “not in the past, but I do now,” and “Never.” The overall RBB has demonstrated good internal consistency ($\alpha = .86$), excellent test-retest reliability ($r = .97$), and convergent validity with recent church attendance ($r = .50$) and purpose in life ($r = .14$; Connors et al., 1996), in a sample of persons seeking treatment for alcoholism.

Statistical Analyses

All analyses were conducted using SPSS version 25. For all manuscripts proposed, Pearson product-moment correlations were conducted to assess associations between, and independence of, our proposed study variables.

For manuscript 1, our multivariate hypotheses were tested using a one-way analysis of variance (ANOVA), allowing comparison of mean levels of each tested variable across the four belief status groups. Tukey’s HSD was utilized as a test of multiple comparison. In separate models, forgiveness, gratitude, humility, and spiritual struggle were entered as the dependent variable, followed by religious belief status as the grouping factor. Covariates are not included in a one-way analysis of variance.

For manuscript 2, our multivariate hypotheses were tested utilizing OLS regression in the Process macro for SPSS (Hayes, 2013), controlling for race/ethnicity, age, sex, gender, and education level.

For manuscript 3, independent, simple moderation analyses were conducted for each belief status and, utilizing Hayes (2013) “model 3” of the PROCESS macro for SPSS, we tested for moderated moderation. Spiritual struggle (i.e., RSSS) were assessed as the independent

variable, with suicide risk as the dependent variable. In separate models, forgiveness (i.e., HFS), gratitude (i.e., GQ), and humility (i.e., CIHS) were investigated as a moderator and, across all models, age, ethnicity, sex, and education level served as covariates.

Chapter 3. Manuscript 1

Religious Virtues and Spiritual Struggles across Religious Backgrounds and Beliefs

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Keywords: religion, spirituality, forgiveness, gratitude, humility, spiritual struggle

Abstract

Previous research has highlighted the potential role of religiousness and spirituality in the development of positive psychological characteristics, such as forgiveness, gratitude, and humility, although religiousness may also be a source of negative spiritual experiences, termed spiritual struggle. Moreover, changes in religious belief and involvement in the U.S., including deconversion, have left gaps in the literature regarding the association between religious belief status, positive psychological functioning, and spiritual struggle. We examined differences in forgiveness, gratitude, humility, and spiritual struggles in persons who are former religious believers who no longer believe, former religious non-believers who now believe, life-long religious believers, and life-long religious non-believers. Participants ($N = 228$) from our online sample provided informed consent and completed self-report measures including the Gratitude Questionnaire, Comprehensive Intellectual Humility Scale, Heartland Forgiveness Scale, Religious and Spiritual Struggles Scale, and the Religious Background and Behaviors Questionnaire. A one-way analysis of variance (ANOVA) indicated that former religious non-believers who now believe exhibit higher levels of forgiveness than all other belief groups. Similarly, life-long religious believers and former religious non-believers who now believe exhibited greater levels of gratitude than life-long non-believers and former believers. Life-long believers also experience fewer religiously focused interpersonal struggles compared to former religious believers and religious converts. Our results suggest that both religious maintenance and transitions may impact adaptive functioning and have implications for our understanding of the contribution of religious belief to the development of positive psychological virtues.

Religious Virtues and Spiritual Struggles across Religious Backgrounds and Beliefs

Religious belief has steadily declined in the U.S. and an increasing number of Americans report changes in the religious beliefs they were raised with (Voas & Chaves, 2016). Yet, little is known about how the maintenance of one's religious beliefs (i.e., life-long religious believers, life-long religious non-believers) or religious transitions (i.e., former religious believers who no longer believe, former religious non-believers who now believe) impact psychological functioning. Given the robust association between religion and spirituality and health-related outcomes, recent research has focused on potential underlying mechanisms for these effects (Hall et al., 2020; Krause, 2010, 2012, 2018). For example, religion/spirituality may contribute to the development of adaptive virtues such as forgiveness, gratitude, and humility (Root Luna et al., 2017; Schnitker & Emmons, 2017) and, as we assert, this linkage may be dependent on one's status as a believer or non-believer.

Further, there is burgeoning evidence that some aspects of religiousness may be detrimental to wellbeing. For example, spiritual struggle is a religious and spiritual experience, common to both religious believers and non-believers, that is associated with poor mental health outcomes, including depression (Murphy et al., 2016), poor psychological adjustment to stressful life events (Ano & Vasconcelles, 2005), and suicidal behaviors (Currier et al., 2017; Exline et al., 2020; Raines et al., 2017). Yet, gaps in the literature exist regarding the linkage between spiritual struggle, positive psychological virtues, and religiousness, as most previous research has focused on religiousness as a dichotomous construct (i.e., religious vs. non-religious). As such, little is known about how changes in religious/spiritual belief (e.g., transition from being a believer to a non-believer) might impact the manifestation of spiritual struggles or the development of adaptive characteristics. To this end, we assessed differences in levels of several

positive psychological virtues, and spiritual struggle, across belief status groups, including life-long religious believers, lifelong religious non-believers, former believers who no longer believe, and former non-believers who now believe.

Some positive psychological virtues are synonymous with religiousness and spirituality, such as forgiveness, which has an integral connection with many world religions and much theoretical and empirical support for its beneficial effects (Worthington, 2007). Defined as "the emotional replacement of (1) hot emotions of anger or fear that follow a perceived hurt or offense, or (2) unforgiveness that follows ruminating about the transgression, by substituting positive emotions such as unselfish love, empathy, compassion, or even romantic love'' (Worthington, 2001, p. 32), forgiveness is widely documented as a protective factor and contributor to psychological wellbeing. For example, in previous research, forgiveness is associated with fewer depressive symptoms (Dezutter et al., 2016), and reduced anxiety and substance misuse (Rowell et al., 2019; Webb et al., 2011).

Forgiveness is theorized to originate from religious socialization and a subsequent internalized belief system in which forgiveness is a moral necessity (Escher, 2013). For example, in a community-based study ($N = 774$), participants who regularly engaged in religious services reported greater willingness to forgive than participants who did not participate in religious services or did not believe in God (Mullet et al., 2003). Similarly, in a national study of adults (N= 1,629), greater religiousness was positively associated with forgiveness (Lutjen et al., 2012).

Compared to non-religious people, religious individuals also tend to have greater motivation for forgiveness and work harder to forgive others (Gorsuch & Hao, 1993). It is unknown, however, whether changes in belief status (i.e., changing from a believer to a non-believer) are associated with corresponding alterations in virtuous characteristics.

Like forgiveness, gratitude confers numerous benefits including greater life-satisfaction (Robustelli & Whisman, 2016), positive affect (McCullough et al., 2002), and psychological well-being (Măirean et al., 2019), and is associated with fewer somatic symptoms (e.g., appetite disturbance, headaches, muscle pain, nausea; Froh et al., 2009). Characterized as "a generalized tendency to recognize and respond with grateful emotion to the roles of other people's benevolence in the positive experiences and outcomes that one obtains" (McCullough et al., 2002, p. 112), gratitude may result from religious beliefs and practices (e.g., prayer, meditation; Emmons & Crumpler, 2000; Lavelock et al., 2016), potentially by fostering meaningfulness or through the process of attributing positive outcomes to a higher power (Krause & Hayward, 2015; Wirtz et al., 2014).

In previous research, by Emmons and Kneezel (2005), conventional religious practices (e.g., prayer, church attendance, reading religious texts), a personal relationship with God, and religious belief, were moderately associated with gratitude. Similarly, in a national sample of adults ($N = 1{,}774$), church attendance and spiritual support were associated with benevolent perceptions of God and, in turn, to greater gratitude (Krause et al., 2015). Across collegiate and clinical samples, greater religious involvement and religious coping were related to more gratitude during times of emotional distress (Rosmarin et al., 2016).

Finally, the relation between humility and religion is unique, as most world religions place a heavy emphasis on this virtue, yet humility may be antithetical to religious belief as religious adherents are expected to hold those beliefs with a high level of conviction (Hook & Davis, 2014). Broadly defined, humility is an other-oriented, rather than self-focused, perspective, marked by respect and an ability to restrain egoistic motives (Davis et al., 2011).

The religious value of humility is evident in religious texts (e.g., "…humility comes before honor," Proverbs 15:33; "And the slaves of the Most Beneficial are those who walk on earth in humility," Quran 25:63; "Humbleness, freedom from hypocrisy…all these I declare to be knowledge, and what is contrary to it, I call ignorance," Bhagavad Gita 13:08), and in ritualistic practices such as prostrating or kneeling for prayer. Moreover, societal perceptions of humility suggest this virtue to be associated with religiousness (Exline & Geyer, 2011).

Indeed, previous research provides support for the link between humility and religiousness. For example, Krause (2014) found that religious commitment was significantly associated with humility, but that frequent church attendance was not; however, in a later study by the same author (Krause, 2018), frequent church attendance was related to greater spiritual support and, in turn, to greater humility. Across studies of undergraduates in the United States and Iran, humility was associated with intrinsic religiousness and extrinsic-personal religiousness (Aghababaei, 2012; Aghababaei et al., 2014). Still, further research is needed to clarify the relation between humility and religiousness, as little is known about how humility may differ across religious belief statuses. It may be that socialization into, or out of, a religious belief system plays a significant role in the development or deterioration of humility (Marriott et al., 2019).

Despite support for the positive benefits of religion, there is evidence that some religious experiences (e.g., negative religious coping, religious doubting) may have a deleterious impact on psychosocial and health functioning (Ellison & Lee, 2010; Exline et al., 2000). Such negative religious experiences are referred to, broadly, as spiritual struggle (Exline & Rose, 2005), which occurs "when some aspect of religious belief, practice or experience becomes a focus of negative thoughts or emotions, concern or conflict" (Exline et al., 2014; p. 208). Importantly, although

spiritual struggles may be more strongly associated with religious belief, growing evidence supports the notion that religious non-believers (i.e., atheist, agnostic) can also endorse spiritual struggles, which may serve as a motivation for religious disbelief (Exline et al., 2016; Fisher, 2017).

For example, in a study of self-identified atheists who previously believed in God, most endorsed nonbelief resulting from negative emotional experiences related to God (e.g., spiritual struggle) and were more likely to experience current negative reactions to the idea of God (Bradley et al., 2017). Similarly, in a study of undergraduates ($N = 3{,}958$), those who reported disengagement from organized religion, but still identified as religious or spiritual, endorsed higher levels of spiritual struggle compared to individuals who maintained their life-long beliefs (i.e., life-long believers, life-long non-believers; Exline et al., 2020). These findings may be particularly relevant as nationwide trends reveal a growing number of individuals who have disengaged from organized religion (Voas & Chaves, 2016).

In sum, spiritual struggles appear to be a common experience regardless of one's identification with formal religion or belief in God, however, the association between spiritual struggles and religious belief status has not been fully explored. In our study, we examine this linkage and, further, we investigate the association between spiritual struggle and the religious virtues of forgiveness, gratitude, and humility, across varying belief statuses, as these virtues may be beneficially related to spiritual struggle. At the bivariate level, we hypothesized that forgiveness, gratitude, and humility would be positively associated, and that each would be negatively associated with spiritual struggle. At the multivariate level, we hypothesized that levels of forgiveness, gratitude, humility, and spiritual struggle would significantly differ based on religious belief status, such that life-long believers would exhibit the highest level of these

characteristics, followed by former religious non-believers who now believe, former religious believers who no longer believe, and life-long non-believers.

Methods

Participants

Participants ($N = 361$) for this study, which was approved by an Institutional Review Board, were recruited through Amazon's Mechanical Turk platform, and provided informed consent prior to completing an online survey. Participants with missing data (n = 133) were excluded from analyses via listwise deletion, resulting in a total sample of 228 respondents.

Participants were compensated $2 for completion of the survey. Funding for this study was provided by a grant from the East Tennessee State University's School of Graduate Studies. Participants self-identified as male (n = 151, 66.2%), female (n = 76, 33.3%), and other (n = 1, 0.4%), and were predominantly White (n = 133, 58.3%), followed by Asian (n = 38, 16.7%), African American (n = 24, 10.5%), Hispanic (n = 19, 8.4%), Native American (n = 11, 4.8%), and Native Hawaiian/other Pacific Islander (n = 2, 0.9%). Participants self-identified as former religious believers who no longer believe (n =85, 37.3%), life-long religious believers (n = 58, 25.4%), former religious non-believers who now believe (n= 41, 18.0%), and life-long religious non-believers (n = 41, 18.0%). The average age of participants was 30.29 (SD = 17.43) years. Participants were recruited as part of a larger study on the association between positive psychological virtues and psychological health.

Measures

In addition to self-report measures, participants completed a demographic questionnaire, which assessed age, sex, ethnicity, education level, and religious affiliation. Participant religious belief status was categorized using a single item from the Religious Background and Behaviors

Questionnaire (Connors et al., 1996). Participants who responded to the question "Have you ever in your life believed in God?" with the response, "yes, and I still do" (Life-long Believers), "yes, in the past but not now" (Former believers who no longer believe), "I didn't use to, but I do now" (Former non-believers who now believe), and "Never" (Life-long Non-believers) were included in the analysis.

Forgiveness of others was measured using a 6-item subscale of the Heartland Forgiveness Scale (HFS; Thompson et al., 2005). Each item is answered on a 7-point Likert scale ranging from 1 ("almost always false of me") to 7 ("almost always true of me") that indicates the degree to which the item is true for the respondent, with higher scores indicating greater forgiveness of others. In a collegiate sample, this HFS subscale demonstrated acceptable internal consistency ($r = .79$), had acceptable test-retest reliability over three weeks ($r = .73$), and was positively associated with another measure of forgiveness of others (i.e., Multidimensional Forgiveness Inventory, $r = .47$, $p < .001$) (Thompson et al., 2005).

We utilized the 6-item Gratitude Questionnaire (GQ; Mccullough et al., 2002) to assess dispositional gratitude (e.g., "If I had to list everything that I felt grateful for, it would be a very long list"). Participants rated their agreement with each statement using a 7-point Likert scale, ranging from 1 ("strongly disagree") to 7 ("strongly agree"), with higher scores indicating greater gratitude. The GQ has demonstrated good internal reliability ($\alpha = .80$), construct validity, and convergent validity, including correlations with optimism ($r = .28$, $p < .001$), happiness ($r = .31$, $p < .001$), agreeableness ($r = .42$, $p < .001$), and extraversion ($r = .11$, $p < .01$), among Taiwanese college students (Chen et al., 2009).

Humility was assessed using the Comprehensive Intellectual Humility Scale (CIHS; Krumrei-Mancuso & Rouse, 2016), which is a 22-item measure consisting of four subscales: 1)

independence of intellect and ego, 2) openness to revising one's viewpoint, 3) respect for other's viewpoints, and 4) lack of intellectual overconfidence. Items are rated on a 5-point Likert scale ranging from 1 ("strongly disagree") to 5 ("strongly agree"), with higher scores indicating greater humility. Example items include "I have at times changed opinions that were important to me, when someone showed me I was wrong" and "I respect that there are ways of making important decisions that are different from the way I make decisions." The CIHS has demonstrated good internal reliability ($\alpha = .88$; Krumrei-Mancuso, 2018), acceptable test-retest reliability ($r = .75$ and $r = .70$ at 1 month and 3 month intervals, respectively), and construct validity as evidenced by correlations with intellectual openness ($r = .52$, $p < .001$), intellectual arrogance ($r = -.53$, $p < .001$) and other measures of humility (e.g., Landrum's self-correction humility subscale, $r = .42$, $p < .001$), among a national community sample (Krumrei-Mancuso & Rouse, 2016).

The Religious and Spiritual Struggles Scale (RSSS; Exline et al., 2014) was used as a measure of spiritual struggle. Participants respond to 26 items (e.g., "Felt as though God had let me down," "Had conflicts with other people about religious/spiritual matters") by rating the extent to which they have experienced the given scenario on a 5-point Likert scale ranging from 1 ("not at all") to 5 ("a great deal"). The RSSS produces an overall score and scores for six subscales including divine struggles, demonic struggles, interpersonal struggles, moral struggles, ultimate meaning, and doubt. Psychometric support for the RSSS includes excellent internal consistency ($\alpha = .91$), and convergent validity including correlations with anger toward God ($r = .49$, $p < .01$) and religious fear and guilt ($r = .55$, $p < .01$), in a sample of U.S. community adults (Exline et al., 2014).

Statistical Analyses

All analyses were conducted using IBM's Statistical Package for the Social Sciences (SPSS; v.25). Pearson Product-Moment Correlations were conducted to assess the bivariate associations among forgiveness, gratitude, humility, and spiritual struggle, including all subscales. A one-way analysis of variance (ANOVA) was conducted to assess mean level differences across life-long religious believers, life-long religious non-believers, former religious believers who no longer believe, and former religious non-believers who now believe. Planned post-hoc analyses using Tukey's HSD were performed for pair-wise comparisons of significant findings.

Results

At the bivariate level, forgiveness, gratitude, and humility were each positively correlated, and all were negatively correlated with the subscales of spiritual struggle (See Table 3.1). At the multivariate level, a one-way analysis of variance revealed statistically significant mean differences for forgiveness between groups ($F(3, 221) = 3.60$, $p = 0.014$). A Tukey's HSD post-hoc analysis revealed that this difference occurred between former religious non-believers who now believe ($M = 25.46$, SD = 5.84) and life-long religious non-believers ($M = 22.12$, SD = 4.45), former believers who no longer believe ($M = 23.24$, SD = 4.32), and life-long religious believers ($M = 23.18$, SD = 4.34), such that former religious non-believers who now believe had higher levels of forgiveness.

Mean levels of gratitude also differed across groups ($F(3,221) = 10.16$, $p < 0.01$) with significant differences occurring between life-long religious believers (M = 31.44, SD = 6.55), who had the highest levels of gratitude, and life-long religious non-believers (M = 28.10, SD = 6.84) and former religious believers who no longer believe (M = 28.27, SD = 5.52). Significant

differences in gratitude were also observed between former religious non-believers who now believe (M = 33.76, SD = 5.75), who had greater gratitude, and life-long non-believers (M = 28.10, SD = 6.84) and former religious believers who no longer believe (M = 28.27, SD = 5.52).

Although there were no significant differences between groups for overall spiritual struggle, several RSSS subscales differed between groups. For Interpersonal Struggles, life-long believers (M = 11.45, SD = 5.87) endorsed fewer interpersonal struggles than former religious believers who no longer believe (M = 13.71, SD = 5.30; $F(3,289) = 3.15$, $p = 0.03$). Similarly, former religious non-believers who now believe (M = 9.31, SD = 5.08) endorsed significantly fewer struggles with ultimate meaning than former religious believers who no longer believe (M = 11.22, SD = 4.45; $F(3,294) = 3.22$, $p = 0.02$). In contrast to our hypothesis, no significant differences between groups were observed for intellectual humility.

Table 3.1

Bivariate Correlations

		1	2	3	4	5	6	7	8	9	*M*	*SD*
1.)	Forgiveness	.									23.48	4.81
2.)	Gratitude	.45									30.07	6.44
3.)	Humility	.46	.44								72.75	10.68
4.)	Spiritual Struggle Total	-.45	-.48	-.60							64.21	29.75
5.)	Divine Struggles	-.45	-.46	-.57	.94						12.09	6.25
6.)	Demonic Struggles	-.39	-.39	-.61	.94	.88					9.51	5.06
7.)	Interpersonal Struggles	-.41	-.45	-.58	.94	.85	.87				12.29	5.97
8.)	Moral Struggles	-.44	-.40	-.54	.94	.86	.86	.84			10.09	4.76
9.)	Doubt	-.42	-.44	-.52	.94	.86	.85	.86	.88		9.94	4.82
10.)	Ultimate Meaning	-.40	-.53	-.52	.91	.81	.80	.85	.83	.82	10.28	4.82

Note: All correlations significant at the .001 level (Two-tailed).
M = Mean; *SD* = Standard Deviation
Forgiveness = forgiveness of others subscale of the Heartland Forgiveness Scale; Gratitude = Gratitude Questionnaire-6; Humility = Comprehensive Intellectual Humility Scale; Spiritual Struggle Total = Religious and Spiritual Struggles Scale; Numbers 5-10 indicate subscales of the Religious and Spiritual Struggles Scale

Discussion

The decline of religious belief and involvement in the United States has left gaps in the literature regarding the impact of such changes in belief status on both the potential positive and negative effects of religiousness and spirituality (Voas & Chaves, 2016). To address this under-researched area, we examined the association between forgiveness, gratitude, humility, and spiritual struggle among life-long religious believers and non-believers, former religious believers who no longer believe, and former religious non-believers who now believe.

To begin, in partial support for our hypotheses, former religious non-believers who now believe reported greater levels of forgiveness than all other belief groups. This finding contrasts with previous theoretical and empirical work that suggests being raised with religious beliefs promotes the development of forgiveness, compared to a non-religious upbringing (Escher, 2013). Rather, our results suggest that transitioning from non-belief to belief is associated with the highest level of forgiveness, and previous research on religious conversion may offer some insights into this finding. For example, religious conversion or growth is often associated with existential angst induced by difficult life events, such as near-death experiences (Jong et al., 2017). In a study of community adults ($N = 229$), spiritually transformative experiences, including near-death experiences, were associated with greater use of forgiveness as a means of integrating new insights (Brook, 2019). Thus, life events that facilitate a conversion to religious belief may also play a role in promoting the practice of forgiveness. Additionally, for former non-believers who now believe, conversion to religious belief may promote religious salience, or the degree of importance that one places on religion in their personal life (Roof & Perkins, 1975). Such religious salience may promote adherence to religious practice and expression of religious values, potentially increasing forgiveness. Indeed, religious salience has previously

been associated with pro-social behaviors (e.g., charitable giving; Malhotra, 2010), although further research is needed to assess the link between religious salience and forgiveness.

While conversion to religious belief may be associated with greater levels of forgiveness, we did not find any significant differences in mean levels of forgiveness between life-long religious believers, life-long religious non-believers, and former religious believers who no longer believe. This finding suggests that the early development of forgiveness may occur outside of a religious context (e.g., school, family interaction; Smith et al., 2017). As Oostenbroek and Vaish (2019) note, forgiveness emerges in childhood as a mechanism to maintain social benefits by repairing interpersonal ruptures, and forgiveness is more likely to be motivated by social norms and transgressor remorse as a child matures, than by religious prescription. Thus, forgiveness may develop as a natural psychosocial process in early childhood and, as well, conversion to religious belief later in life may prompt an increase in one's propensity to forgive.

Our results also suggest that life-long religious believers and former religious non-believers who now believe exhibit greater levels of gratitude than both life-long religious non-believers and former religious-believers who no longer believe, supporting the well-established linkage between religiousness and gratitude (Krause et al., 2016). As previous research suggests, gratitude may result from engagement with religious traditions and practices, such as prayer or meditation (Wirtz et al., 2014). The association between gratitude and religious belief may also be a result of the social benefits of religious involvement. For instance, social support gained through church attendance may play a role in the development of gratitude (Krause & Ellison, 2009). Gratitude is also hypothesized to result from God-mediated control beliefs, defined as "the belief that God works together with people to help them overcome the difficulties and

challenges that arise in their lives" and previous research has supported this hypothesis. In a longitudinal study of older adults in the community (N = 818), God-mediated control beliefs were associated with increased gratitude (Krause, 2009). In contrast to religious converts and life-long religious believers, life-long religious non-believers and deconverts may be less likely to hold God-mediated beliefs (e.g., belief that God heals illnesses) and engage in fewer religious activities (e.g., church attendance, prayer) that promote gratitude, contributing to the discrepancy in gratitude among religious believers and non-believers (Emmons & Kneezel, 2005; Mccullough et al., 2004).

Finally, although spiritual struggle, overall, did not vary significantly across groups, our results suggest that life-long religious believers experience fewer religiously focused interpersonal struggles than former religious believers who no longer believe. Although changes in religious belief, whether conversion or deconversion, can be a significant life event, a loss of religious belief may be a particularly stressful process, as this may deleteriously impact social functioning, including potential ostracization from one's former social network (Fisher, 2017). In previous research with adults in the community (N = 34,565), such deterioration in social support, within the context of religious struggle or disengagement, was associated with poor subjective well-being including worse self-rated health and less happiness (Fenelon & Danielsen, 2016). In contrast, conversion to religious belief, or life-long engagement with religious beliefs and practices, may result in the development and maintenance of social networks and perceived growth of social support and belongingness (Mossière, 2007).

Our results also suggest that former religious non-believers who now believe experience fewer struggles related to ultimate meaning than former religious believers who no longer believe. This finding is consistent with the coherence hypothesis, which suggests that religion

and spirituality serve as a source of existential meaning and purposefulness (George et al., 2000). For former religious believers who no longer believe, a loss of religious belief may result in disruption to a previously held meaning-making system, and such loss of meaning may be particularly evident in times of crises, when psychological distress is no longer able to be mitigated by a religious belief system (Park, 2013). In contrast, conversion to religious belief may enhance the salience of a newly adopted system of existential meaning (Carrothers, 2010). Such religious salience may be particularly relevant for religious converts, rather than life-long religious believers, as some evidence suggests that commitment to childhood religious beliefs declines in adulthood (Chan et al., 2015).

Our results underscore the potential impact that religious beliefs and transitions may have on positive psychological functioning and spiritually related distress. Given the documented linkage between mental health functioning, religiousness, and positive psychological characteristics (Hall et al., 2020; Sharma & Singh, 2019), forgiveness may be a relative strength for adults who report a conversion to religious belief. Similarly, gratitude may serve as a source of well-being for religious believers, whether life-long or converts. Importantly, although religious belief may help to facilitate the expression of these virtues, forgiveness and gratitude should not be considered exclusive to religious worldviews, and growing evidence suggests that these traits can be developed outside of the context of religion. For example, therapeutic interventions that incorporate forgiveness and gratitude have been shown to increase levels of these characteristics (Lee & Enright, 2014; Sztachańska et al., 2019). In a study of adult children of alcoholics, a 12-week group-based forgiveness intervention was effective at increasing levels of forgiveness among study participants (Osterndorf et al., 2011). Similarly, improvements in gratitude were observed following a gratitude intervention (i.e., daily gratitude diary) among a

clinical sample of adults (Kerr et al., 2015). Spiritual struggles may also be an important target of intervention for those who deconvert from religious belief, as these individuals may be particularly vulnerable to social ostracization and a loss of meaning in life (Zimmerman et al., 2015). Previous research has shown that both spiritually integrated interventions (e.g., Religious Cognitive Behavioral therapy), and secular therapies (e.g., Cognitive Behavioral Therapy), are effective at addressing spiritual struggle through integrating religious beliefs and spiritual practices (e.g., mindfulness) in treatment (Pearce & Koenig, 2016). Thus, such interventions may be a viable approach to the treatment of psychological distress, including suicide risk, among both religious believers and non-believers experiencing spiritually related distress. Given that shifts in the religious landscape of the U.S. reflect a decline in religious belief, research should expand to examine the impact of such religious transitions on mental health functioning.

Our results should be interpreted in the context of several limitations. First, although our findings offer preliminary evidence for the differential impact of religious belief on forgiveness, gratitude, and spiritual struggle, the use of cross-sectional data limits support for causal conclusions. Additionally, due to the use of self-report measures, our data are susceptible to social desirability bias, which may be particularly influential given the moral valence of the study variables (i.e., forgiveness, gratitude, humility, spiritual struggle). That is, participants may be inclined to present themselves in a positive way through over-reporting of positive features (e.g., forgiveness, gratitude, humility), or under-reporting of negative qualities (e.g, spiritual struggle). Finally, our sample is primarily comprised of life-long religious believers and former religious believers who now believe, with fewer life-long religious non-believers and former non-believers who now believe, which may result in limited statistical power for detecting small effects.

In sum, a growing body of literature supports the relation between religiousness and positive psychological virtues such as forgiveness, gratitude, and humility; yet, limited research exists on the differential impact of religious beliefs and transitions on positive psychological functioning. Additionally, little is known about how negative religious and spiritual experiences (i.e., spiritual struggle) may manifest across varying belief statuses. Our study provides preliminary evidence for the assertion that forgiveness, gratitude, and spiritual struggle may differ based on one's religious background and beliefs. Future research is needed to expand our understanding of the association between religious belief and positive psychological traits, and between belief status and negative religious experiences, and their interrelated impact on psychosocial functioning.

References

Aghababaei, N. (2014). God, the good life, and HEXACO: The relations among religion, subjective well-being and personality. *Mental Health, Religion & Culture*, *17*(3), 284–290. doi:10.1080/13674676.2013.797956

Aghababaei, N., Wasserman, J. A., & Nannini, D. (2014). The religious person revisited: Cross-cultural evidence from the HEXACO model of personality structure. *Mental Health, Religion & Culture*, *17*(1), 24–29. doi:10.1080/13674676.2012.737771

Ano, G. G., & Vasconcelles, E. B. (2005). Religious coping and psychological adjustment to stress: A meta-analysis. *Journal of Clinical Psychology*, *61*(4), 461–480. doi:10.1002/jclp.20049

Bradley, D. F., Exline, J. J., & Uzdavines, A. (2017). Relational reasons for nonbelief in the existence of gods: An important adjunct to intellectual nonbelief. *Psychology of Religion and Spirituality*, *9*(4), 319-327. doi:10.1037/rel0000073

Carrothers, R. M. (2010). Identity consequences of religious changing: Effects of motivation for change on identity outcomes. *Sociological Focus*, *43*(1), 150-162. doi:10.1080/00380237.2010.10571373.

Chan, M., Tsai, K. M., & Fuligni, A. J. (2015). Changes in religiosity across the transition to young adulthood. *Journal of Youth and Adolescence*, *44*(8), 1555–1566. doi:10.1007/s10964-014-0157-0

Chen, L. H., Chen, M. Y., Kee, Y. H., & Tsai, Y. M. (2009). Validation of the gratitude questionnaire (GQ) in Taiwanese undergraduate students. *Journal of Happiness Studies*, *10*(6), 655–664. doi:10.1007/s10902-008-9112-7

Currier, J. M., Smith, P. N., & Kuhlman, S. (2017). Assessing the unique role of religious coping

in suicidal behavior among U.S. Iraq and Afghanistan veterans. *Psychology of Religion and Spirituality*, *9*(1), 118–123. doi:10.1037/rel0000055

Davis, D. E., Hook, J. N., Worthington, E. L., Van Tongeren, D. R., Gartner, A. L., Ii, D. J. J., & Emmons, R. A. (2011). Relational humility: Conceptualizing and measuring humility as a personality judgment. *Journal of Personality Assessment*, *93*(3), 225–234. doi:10.1080/00223891.2011.558871

Dezutter, J., Toussaint, L., & Leijssen, M. (2016). Forgiveness, ego-integrity, and depressive symptoms in community-dwelling and residential elderly adults. *The Journals of Gerontology* , *71*(5), 786–797. doi:10.1093/geronb/gbu146

Ellison, C. G., & Lee, J. (2010). Spiritual struggles and psychological distress: Is there a dark side of religion? *Social Indicators Research, 98*(3), 501-517. doi:10.1007/s11205-009-9553-3

Emmons, R. A., & Crumpler, C. A. (2000). Gratitude as a human strength: Appraising the evidence. *Journal of Social and Clinical Psychology*, *19*(1), 56–69. doi:10.1521/jscp.2000.19.1.56

Emmons, R. A., & Kneezel, T. T. (2005). Giving thanks: Spiritual and religious correlates of gratitude. *Journal of Psychology and Christianity*, *24*(2), 140–148.

Escher, D. (2013). How does religion promote forgiveness? Linking beliefs, orientations, and practices. *Journal for the Scientific Study of Religion*, *52*(1), 100–119. doi:10.1111/jssr.12012

Exline, J. J., & Geyer, A. L. (2004). Perceptions of humility: A preliminary study. *Self and Identity*, *3*(2), 95–114. doi:10.1080/13576500342000077

Exline, J. J., Homolka, S. J., & Harriott, V. A. (2016). Divine struggles: Links with body image

concerns, binging, and compensatory behaviours around eating. *Mental Health, Religion & Culture*, *19*(1), 8-22. doi:10.1080/13674676.2015.1087977

Exline, J. J., Pargament, K. I., Grubbs, J. B., & Yali, A. M. (2014). The Religious and Spiritual Struggles Scale: Development and initial validation. *Psychology of Religion and Spirituality*, *6*(3), 208–222. doi:10.1037/a0036465.supp

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, NY: Guilford Press.

Exline, J. J., Van Tongeren, D. R., Bradley, D. F., Wilt, J. A., Stauner, N., Pargament, K. I., & DeWall, C. N. (2020). Pulling away from religion: Religious/spiritual struggles and religious disengagement among college students. *Psychology of Religion and Spirituality*. Advanced online publication. doi:10.1037/rel0000375

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*(12), 1481–1496. doi:10.1002/1097-4679(200012)56:12<1481::AID-1>3.0.CO;2-A

Fenelon, A., & Danielsen, S. (2016). Leaving my religion: Understanding the relationship between religious disaffiliation, health, and well-being. *Social Science Research*, *57*, 49–62. doi:10.1016/j.ssresearch.2016.01.007

Fisher, A. R. (2017). A review and conceptual model of the research on doubt, disaffiliation, and related religious changes. *Psychology of Religion and Spirituality*, *9*(4), 358–367. doi:10.1037/rel0000088

Froh, J. J., Yurkewicz, C., & Kashdan, T. B. (2009). Gratitude and subjective well-being in early adolescence: Examining gender differences. *Journal of Adolescence*, *32*, 633–650.

doi:10.1016/j.adolescence.2008.06.006

Gorsuch, R. L., & Hao, J. Y. (1993). Forgiveness: An exploratory factor analysis and its relationships to religious variables. *Review of Religious Research*, *34*(4), 333. doi:10.2307/3511971

Gouveia, V. V., Ribeiro, M. G. C., de Aquino, T. A. A., Loureto, G. D. L., Nascimento, B. S., & Rezende, A. T. (2019). Gratitude Questionnarie (GQ-6): Evidence of construct validity in Brazil. *Current Psychology*. doi:10.1007/s12144-019-00197-x

Hall, B. B., Webb, J. R., & Hirsch, J. K. (2020). Spirituality and suicidal behavior: The mediating role of self-forgiveness and psychache. *Psychology of Religion and Spirituality*, 12(1), 36–44. doi:10.1037/rel0000182

Hook, J. N., & Davis, D. E. (2014). Humility, religion, and spirituality: Introduction to the special issue. *Journal of Psychology and Theology*, *42*(1), 3–6.

Jong, J., Ross, R., Philip, T., Chang, S.-H., Simons, N., & Halberstadt, J. (2018). The religious correlates of death anxiety: A systematic review and meta-analysis. *Religion, Brain & Behavior*, *8*(1), 4–20. doi:10.1080/2153599X.2016.1238844

Kerr, S. L., O'Donovan, A., & Pepping, C. A. (2015). Can gratitude and kindness interventions enhance well-being in a clinical sample? *Journal of Happiness Studies: An Interdisciplinary Forum on Subjective Well-Being*, *16*(1), 17–36. doi:10.1007/s10902-013-9492-1

Kong, F., You, X., & Zhao, J. (2017). Evaluation of the Gratitude Questionnaire in a Chinese sample of adults: Factorial validity, criterion-related validity, and measurement invariance across sex. *Frontiers in Psychology*, 8(1). doi: 10.3389/fpsyg.2017.01498

Krause, N. (2009). Religious involvement, gratitude, and change in depressive symptoms over

time. *International Journal for the Psychology of Religion*, 19(3), 155–172. doi:10.1080/10508610902880204

Krause, N. (2010). Religious involvement, humility, and self-rated health. *Social Indicators Research*, *98*(1), 23–39. doi:10.1007/s11205-009-9514-x

Krause, N. (2012). Religious involvement, humility, and change in self-rated health over time. *Journal of Psychology and Theology*, *40*(3), 199–210. doi:10.1177/009164711204000303

Krause, N. (2014). Exploring the relationships among humility, negative interaction in the church, and depressed affect. *Aging and Mental Health*, *18*(8), 970–979. doi:10.1080/13607863.2014.896867

Krause, N. (2018). Assessing the relationships among religion, humility, forgiveness, and self-rated health. *Research in Human Development*, *15*(1), 33–49. doi:10.1080/15427609.2017.1411720

Krause, N., Emmons, R. A., & Ironson, G. (2015). Benevolent images of God, gratitude, and physical health status. *Journal of Religion and Health*, *54*(4), 1503–1519. doi:10.1007/s10943-015-0063-0

Krause, N., & Hayward, R. D. (2015). Humility, compassion, and gratitude to God: Assessing the relationships among key religious virtues. *Psychology of Religion and Spirituality*, *7*(3), 192–204. doi:10.1037/rel0000028

Krumrei-Mancuso, E. J. (2018). Intellectual humility's links to religion and spirituality and the role of authoritarianism. *Personality and Individual Differences*, *130*, 65–75. doi:10.1016/j.paid.2018.03.037

Krumrei-Mancuso, E. J., & Rouse, S. V. (2016). The development and validation of the Comprehensive Intellectual Humility Scale. *Journal of Personality Assessment*, *98*(2), 209–

221. doi:10.1080/00223891.2015.1068174

Langer, Á. I., Ulloa, V. G., Aguilar-Parra, J. M., Araya-Véliz, C., & Brito, G. (2016). Validation of a Spanish translation of the Gratitude Questionnaire (GQ-6) with a Chilean sample of adults and high schoolers. *Health and Quality of Life Outcomes*, *14*(53). doi:10.1186/s12955-016-0450-6

Lee, Y.-R., & Enright, R. D. (2014). A forgiveness intervention for women with fibromyalgia who were abused in childhood: A pilot study. *Spirituality in Clinical Practice*, *1*(3), 203–217. doi:10.1037/scp0000025.supp

Luna, L. M. R., Van Tongeren, D. R., & Witvliet, C. V. O. (2017). Virtue, positive psychology, and religion: Consideration of an overarching virtue and an underpinning mechanism. *Psychology of Religion and Spirituality*, *9*(3), 299–302. doi:10.1037/rel0000127

Lutjen, L. J., Silton, N. R., & Flannelly, K. J. (2012). Religion, forgiveness, hostility and health: A structural equation analysis. *Journal of Religion and Health*, *51*(2), 468–478. doi:10.1007/s10943-011-9511-7

Măirean, C., Turliuc, M. N., & Arghire, D. (2019). The relationship between trait gratitude and psychological wellbeing in university students: The mediating role of affective state and the moderating role of state gratitude. *Journal of Happiness Studies: An Interdisciplinary Forum on Subjective Well-Being*, *20*(5), 1359–1377. doi:10.1007/s10902-018-9998-7

Malhotra, D. (2010). (When) are religious people nicer? Religious salience and the “Sunday effect” on pro-social behavior. *Judgment and Decision Making*, *5*(2), 138–143.

Marriott, R. J., Hall, M. E. L., & Decker, L. A. (2019). Psychological correlates of reasons for nonbelief: Tolerance of ambiguity, intellectual humility, and attachment. *Mental Health, Religion & Culture*, *22*(5), 480–499. doi:10.1080/13674676.2019.1625313

McCullough, M. E., Emmons, R. A., & Tsang, J.-A. (2002). The grateful disposition: A conceptual and empirical topography. *Journal of Personality and Social Psychology, 82*(1), 112–127. doi:10.1037/0022-3514.82.1.112

Mccullough, M. E., Kilpatrick, S. D., Emmons, R. A., & Larson, D. B. (2001). Is gratitude a moral affect? *Psychological Bulletin*, *127*(2), 249–266. doi:10.1037/0033-2909.127.2.249

Mccullough, M. E., Tsang, J.-A., & Emmons, R. A. (2004). Gratitude in intermediate affective terrain: Links of grateful moods and individual differences and daily emotional experiences. *Journal of Personality and Social Psychology*, *86*(2), 295–309. doi:10.1037/0022-3514.86.2.295

Mullet, E., Barros, J., Veronica Usai, L. F., Neto, F., & Riviere Shafighi, S. (2003). Religious involvement and the forgiving personality. *Journal of Personality*, *71*(1), 1–19. doi:10.1111/1467-6494.t01-1-00003

Murphy, P. E., Fitchett, G., & Emery-Tiburcio, E. E. (2016). Religious and spiritual struggle: Prevalence and correlates among older adults with depression in the BRIGHTEN Program. *Mental Health, Religion & Culture, 19*(7), 713–721. doi:10.1080/13674676.2016.1244178

Oostenbroek, J., & Vaish, A. (2019). The emergence of forgiveness in young children. *Child Development*, 90(6), 1969–1986. doi:10.1111/cdev.13069

Osterndorf, C., Enright, R., Holter, A., & Klatt, J. (2011). Treating adult children of alcoholics through forgiveness therapy. *Alcoholism Treatment Quarterly*, *29*(3), 274–292. doi:10.1080/07347324.2011.586285

Park, C. L. (2013). *Religion and meaning*. In R. F. Paloutzian & C. L. Park (Eds.), Handbook of the psychology of religion and spirituality., 2nd ed. (pp. 357–379). The Guilford Press.

Pearce, M. J., & Koenig, H. G. (2016). Spiritual struggles and religious cognitive behavioral therapy: A randomized clinical trial in those with depression and chronic medical illness. *Journal of Psychology and Theology, 44*(1), 3-15. doi10.1177/009164711604400101

Raines, A. M., Currier, J., McManus, E. S., Walton, J. L., Uddo, M., & Franklin, C. L. (2017). Spiritual struggles and suicide in veterans seeking PTSD treatment. *Psychological Trauma: Theory, Research, Practice and Policy*, *9*(6), 746–749. doi:10.1037/tra0000239

Reist Gibbel, M., Regueiro, V., & Pargament, K. I. (2019). A spiritually integrated intervention for spiritual struggles among adults with mental illness: Results of an initial evaluation. *Spirituality in Clinical Practice*, *6*(4), 240–255. doi:10.1037/scp0000207

Robustelli, B. L., & Whisman, M. A. (2018). Gratitude and life satisfaction in the United States and Japan. *Journal of Happiness Studies: An Interdisciplinary Forum on Subjective Well-Being*, *19*(1), 41–55. doi:10.1007/s10902-016-9802-5

Roof, W., & Perkins, R. (1975). On Conceptualizing Salience in Religious Commitment. *Journal for the Scientific Study of Religion*, 14(2), 111-128. doi:10.2307/1384735

Rosmarin, D. H., Pirutinsky, S., Greer, D., & Korbman, M. (2016). Maintaining a grateful disposition in the face of distress: The role of religious coping. *Psychology of Religion and Spirituality*, *8*(2), 134–140. doi:10.1037/rel0000021

Rowell, P. C., Cashwell, C. S., & Zambrowicz, R. (2019). Calm in the storm: The influence of spirituality, dispositional forgiveness, and God concept on anxiety. *Journal of Spirituality in Mental Health*, 1–12. doi:10.1080/19349637.2019.1593916

Schnitker, S. A., & Emmons, R. A. (2017). The psychology of virtue: Integrating positive psychology and the psychology of religion. *Psychology of Religion and Spirituality*, 9(3),

239–241. doi:10.1037/rel0000133

Sharma, S., & Singh, K. (2019). Religion and well-being: The mediating role of positive virtues. *Journal of Religion and Health*, *58*(1), 119–131. doi:10.1007/s10943-018-0559-5

Smith, C. E., Noh, J. Y., Rizzo, M. T., & Harris, P. L.(2017). When and why parents prompt their children toapologize: The roles of transgression type and parent-ing style. *Journal of Family Studies*, 23, 38–61. doi:10.1080/13229400.2016.1176588

Sztachańska, J., Krejtz, I., & Nezlek, J. B. (2019). Using a gratitude intervention to improve the lives of women with breast cancer: A daily diary study. *Frontiers in Psychology*, *10(1365),* 1 - 11. doi:10.3389/fpsyg.2019.01365

Thompson, L. Y., Snyder, C. R., Hoffman, L., Michael, S. T., Rasmussen, H. N., Billings, L., Heinze, L., Nuefeld, J. E., Shorey, H. S., Roberts, J. C., & Roberts, D. E. (2005). Dispositional forgiveness of self, others, and situations. *Journal of Personality*, *73*(2), 313–360. doi:10.1111/j.1467-6494.2005.00311.x

Valdez, J. P. M., Yang, W., & Datu, J. A. D. (2017). Validation of the Gratitude Questionnaire in Filipino secondary school students. *The Spanish Journal of Psychology*, *20*(E45). doi:10.1017/sjp.2017.51

Voas, D., & Chaves, M. (2016). Is the United States a counterexample to the secularization thesis? *American Journal of Sociology*, 121(5), 1517–1556. doi:10.1086/684202

Webb, J. R., Hirsch, J. K., & Toussaint, L. (2011). Forgiveness and alcohol problems: A review of the literature and a call for intervention-based research. *Alcoholism Treatment Quarterly*, *29*(3), 245–273. doi:10.1080/07347324.2011.585922

Wirtz, D., Gordon, C. L., & Stalls, J. (2014). Gratitude and spirituality: *A review of theory and research*. In Religion and Spirituality Across Cultures, Chu Kim-Prieto (Ed.),. New York,

NY: Springer. doi:10.1007/978-94-017-8950-9_15

Worthington, E. L. (2007). *Handbook of Forgiveness*. Routledge. doi:10.4324/9780203955673

Zimmerman, K., Smith, J., Simonson, K., & Myers, W. (2015). Familial relationship outcomes of coming out as an atheist. *Secularism and Nonreligion*, *4*(4), 1 – 13. doi:10.5334/snr.aw.

Chapter 4. Manuscript 2

Religious and Spiritual Predictors of Suicide Risk: Forgiveness, Gratitude, Humility, and Spiritual Struggle

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Keywords: suicide, forgiveness, gratitude, humility, spiritual struggle

Abstract

Religiousness and spirituality are most often considered to exert a protective effect on suicide risk, although less is known about potential mechanisms of action for this association, such as processes of forgiveness, gratitude, and humility. Despite the potential for these virtues to mitigate suicide risk, religion may also serve as a source of distress, through experiences termed spiritual struggle, which can exacerbate suicide risk. Importantly, these linkages have not been examined in the context of religious transitions or across belief status groups, including among life-long religious believers, life-long religious non-believers, former religious believers who no longer believe, and former religious non-believers who now believe. A national sample of community adults from the United States ($N = 214$) were recruited through Amazon's MTurk and completed online self-report measures, including the Heartland Forgiveness Scale, Gratitude Questionnaire, Intellectual Humility Scale, Religious and Spiritual Struggles Scale, and the Suicidal Behaviors Questionnaire - Revised. In regression analyses, forgiveness and humility were inversely associated with suicide risk, with no differences across religious backgrounds and beliefs. Conversely, spiritual struggle was consistently associated with greater suicide risk across religious belief groups. The linkage between gratitude and suicide risk, however, was moderated by religious belief status, such that that the association between gratitude and suicide risk was more robust for religious converts, than for other belief groups. Interventions developed to address spiritual struggle and enhance forgiveness, gratitude, and humility may prove effective in the prevention of suicide.

Religious and Spiritual Predictors of Suicide Risk: Forgiveness, Gratitude, Humility, and Spiritual Struggle

Suicide rates in the United States are currently at their highest point in nearly 75 years (Hedegaard et al., 2020). Despite a growing wealth of empirical literature examining risk and protective factors for suicide, it remains a leading cause of death worldwide, necessitating novel avenues of prevention and intervention. Upward trends in suicide have coincided with increasing interest in positive psychological factors that might protect against suicide risk, including religion and spirituality (Caribe et al., 2015; Hall et al., 2020). Moreover, the robust association between religion and both physical and mental health outcomes, including suicide, has led to the systematic investigation of psychological virtues theorized to facilitate religions' salubrious effect on wellbeing (Root Luna et al., 2017). Among these virtues, and a central focus of this study, are forgiveness, gratitude, and humility, which have shown efficacy as protective factors in mitigating risk for suicide (Kopacz et al., 2016). Yet, despite declining sociodemographic trends in religiousness in the U.S. (Voas & Chaves, 2016), little is known about how religious belief status, or changes in belief, including conversion, impact the linkage between these positive psychological characteristics and suicide risk.

Further, although religion/spirituality may foster the development of positive psychological virtues, emerging research suggests that religion has the potential to serve as a basis for psychological distress and increased suicide risk through a process of unwanted religious conflict or tension, termed spiritual struggle (Currier et al., 2017; Raines et al., 2017).

Most research focused on spiritual struggle has been limited to samples comprised of individuals endorsing religious belief (e.g., Wilt et al., 2021); however, spiritual struggle can be experienced by individuals who endorse non-belief and may serve as a basis for one's

intellectual reasoning for non-belief (Marriot et al., 2019; Exline et al., 2020). Despite evidence linking spiritual struggle to suicide risk (Currier et al., 2018), the manifestation of spiritual struggle, and its impact, may be unique across religious backgrounds and beliefs. As such, we assessed forgiveness, gratitude, humility, and spiritual struggle, and their association with suicide risk, across diverse religious belief statuses, including life-long believers, life-long non-believers, former religious non-believers who now believe, and former religious believers who no longer believe.

Theoretical and empirical investigations have highlighted the potential role of positive psychological virtues, such as forgiveness, gratitude, and humility, which may be promoted by religious or spiritual engagement. For example, forgiveness, which has a beneficial effect on health and wellbeing, including reduced suicide risk, is emphasized by most mainstream religions (Kopacz, et al., 2016), and research indicates that religious individuals report greater forgiveness than their non-religious counterparts. In an early study, individuals who endorsed greater religiosity (i.e., intrinsic/extrinsic religiosity, church attendance) rated forgiveness as a greater priority than individuals who were less religious (Rokeach, 1975). Moreover, in a study by Gorsuch and Hao (1993), religious individuals reported greater motivation to forgive and fewer reasons to resent others. In a conceptual model of the development of forgiveness, Escher (2013) suggests that religion fosters forgiveness through interactions with religious leaders, caregivers, and religious practices (e.g., prayer, reading scripture), and, using a nationally representative sample, Escher confirmed that adolescent religiousness is associated with greater forgiveness in adulthood for life-long religious believers but not for those who abandon their adolescent religious beliefs. Thus, religion may serve as an important mechanism in the development and maintenance of one’s disposition to forgive.

Although a growing body of literature indicates an association between religiousness and forgiveness, and between forgiveness and suicide risk, limited research has investigated their inter-association. Webb et al. (2015) devised a conceptual model whereby spirituality fosters the development of forgiveness, which, in turn, is inversely associated with suicide risk. Some research exists to support the premise of this model. For example, in a sample of veterans entering treatment for PTSD, Kopacz and colleagues (2016) examined forgiveness as an element of spirituality, finding that veterans with greater suicidal ideation and attempts reported less forgiveness and engagement in organized religion compared to non-suicidal veterans. Yet, despite clear linkages between religiousness/spirituality and forgiveness, much of the research on forgiveness and suicide exists outside of the context of religion and spirituality (e.g., Sansone et al., 2013), and little is known about how changes in religious belief status may impact the manifestation of forgiveness or its effect on suicide risk.

Conceptualized as "a generalized tendency to recognize and respond with grateful emotion to the roles of other people's benevolence in the positive experiences and outcomes that one obtains" (McCullough et al., 2002, p. 112), gratitude also appears to exert a beneficial impact on health and wellbeing (Sirois & Wood, 2017). Like forgiveness, the virtue of gratitude is heavily emphasized in religious texts (e.g., "Let them give thanks to the Lord for his unfailing love…", Psalm 107:21) and may be facilitated by ritualistic practices, such as prayer (Lambert et al., 2009). For example, in a longitudinal study of community adults ($N = 81$), participants who engaged in spiritual practices (e.g., prayer, meditation) and reported greater spirituality, displayed higher levels of gratitude over a 3-week period (Olson et al., 2018). Similarly, among persons with chronic illness and depression, gratitude was associated with public religiousness

(i.e., church attendance), private religious activities (e.g., prayer), self-rated spirituality, and intrinsic religiosity (i.e., importance of religion to one's daily life; Koenig et al., 2014).

Gratitude has also emerged as a robust protective factor against suicide. In a longitudinal study of undergraduate students, gratitude was associated with less suicidal ideation (Kleiman et al., 2013) and, similarly, among Chinese adolescents ($N = 1252$), gratitude was related to less suicidal ideation and attempts (Li et al., 2012). However, relatively few studies have examined the association between gratitude and suicide in the context of religiousness. In a study of undergraduates ($N = 165$), greater religiousness was related to gratitude, and both were associated with less past suicidal ideation (Krysinska et al., 2015). Regarding suicide risk factors, in a longitudinal study of U.S. older adults ($N = 818$), greater church attendance and God-mediated control beliefs (i.e., belief that God exerts control over one's life) were associated with higher levels of gratitude and, in turn, to fewer depressive symptoms (Krause, 2009). Despite evidence for the link between religiousness, gratitude, and psychopathology, including suicide risk, most studies have examined religiosity as a unidimensional construct, with individuals endorsing either low or high religiousness. Thus, little is known about how the presence or absence of, or changes in, religious belief status may affect the link between gratitude and suicide.

Unlike the study of forgiveness and gratitude, the psychological science of humility has developed more slowly over the past decade (Hook & Davis, 2014), but there is growing support for its beneficial impact on physical and psychosocial functioning (Krause, 2010). For example, in a study of undergraduates, humility was negatively associated with depressive symptoms, and, in a graduate student sample, forgiveness was associated with greater humility and, in turn, to less depression (Franco & McElroy-Heltzel, 2019; Jankowski et al., 2013). Conceptualized as "a

non-threatening awareness of one's intellectual fallibility" (Krumrei-Mancuso, & Rouse, 2016), the value of humility in religious contexts has been widely documented, for example, in religious texts (e.g., "…all who humble themselves will be exalted," Matthew 23:12). Further, growing evidence suggests that religious belief and involvement can foster the development of humility (e.g., Aghababaei, 2014), perhaps by promoting the view that there is something greater than the self (e.g., God).

Despite a growing body of support for the beneficial impact of humility on physical and mental health (Krause, 2009; Jankowski et al., 2013), to our knowledge, no previous research has examined the association between humility and suicide. Nevertheless, related research provides preliminary evidence suggesting that humility may be negatively associated with suicide risk factors. For example, in a study of adult Christians (*N* = 1,154), greater humility was associated with lower levels of depressed affect, and humility buffered the relation between negative interactions in church and depressive symptoms (Krause, 2014). Similarly, among a national sample of adults (*N* =3,010), humility moderated the relation between stressful life events and symptoms of depression and anxiety (Krause et al., 2016). Research on constructs related to humility (e.g., narcissism) may also highlight humility's potential link to suicide risk. In a study of German and Chinese undergraduate students, narcissism (i.e., low in humility) was directly associated with suicidal ideation and was also indirectly related via the mediating role of depressive symptoms (Brailovskaia et al., 2019). The association between narcissistic traits and suicidal ideation has also been documented among adult, mental health outpatients (Jaksic et al., 2017) and geriatric patients with depression (Heisel et al., 2007). Despite peripheral support for a linkage between humility and suicide risk, additional research is needed to better understand this potential protective effect in the context of religious beliefs and transitions.

Although understanding the benefits of religiousness for wellbeing, including suicide risk, is important, it must also be recognized that religion may be a source of distress or tension for religious believers and non-believers alike (Exline et al., 2016). This spiritual or religious distress is termed spiritual struggle and occurs "when some aspect of religious belief, practice or experience becomes a focus of negative thoughts or emotions, concern or conflict" (Exline et al., 2014, p. 208). At times, spiritual struggle may lead to a strengthening of and motivation towards congruence with one's religious beliefs (Exline & Rose, 2005), however spiritual struggle may also serve as one's justification for religious deconversion (Fisher, 2017).

Spiritual struggle is a known risk factor for suicide (Ellison & Lee, 2010; Exline et al., 2000). For instance, in a study of advanced cancer patients ($N = 603$), spiritual and religious distress was associated with suicide risk, even after controlling for demographic variables, social support, mental and physical health, and general religiosity (Trevino et al., 2014). Additionally, religious fear and guilt related to the commission of sin is related to suicide ideation among college students (Exline et al., 2000), and spiritual struggle is linked to lifetime suicide ideation and attempts in veterans, independent of the effects of depression or PTSD (Currier et al., 2017).

Like the other variables of our study, spiritual struggle is not often investigated in the context of religious transitions, or in non-religious persons. Given changing trends in religiousness in the United States, it is critical to investigate the impact of initiating, maintaining, or transitioning between religious beliefs on the manifestation of positive psychological functioning and suicide risk. We hypothesized that, at the bivariate level, forgiveness, gratitude, and humility would be positively associated, and that each would be negatively associated with spiritual struggle and suicide risk. We also hypothesized that spiritual struggle and suicide risk would be positively associated. At the multivariate level, we hypothesized that forgiveness,

gratitude, and humility would be associated with less suicide risk, and spiritual struggle would be associated with greater suicide risk. Moreover, we hypothesized that these associations would be stronger for life-long religious believers, followed by religious converts, religious deconverts, and life-long religious non-believers.

Methods

Participants

Respondents (*N* = 361) were recruited as part of a larger study investigating the association between positive psychological functioning and mental health. Participants were recruited via Amazon's Mechanical Turk, provided informed consent, and were compensated $2 for completion of an online self-report survey. Participants (n = 147) with missing data were excluded from our analyses using listwise deletion, resulting in a final sample of 214 respondents.

Participants were primarily male (n = 142, 66.4%), followed by female (n = 71, 33.2%), and other (n = 1, 0.5%). Participants self-identified as predominantly White (n = 126, 58.9%), followed by Asian (n = 37, 17.3%), African American (n = 23, 10.7%), Hispanic (n = 11, 5.1%), Native American (n = 10, 4.7%), Latino/a (n = 5, 2.3%), and Native Hawaiian/Pacific Islander (n = 2, 0.9%). The average age of participants was 30.85 (SD = 16.90) years. Participants self-identified as former religious believers who no longer believe (n =82, 38.3%), life-long religious believers (n = 54, 25.2%), former religious non-believers who now believe (n= 38, 17.8%), and life-long religious non-believers (n = 37, 17.3%).

Measures

Participants responded to demographic items indicating age, sex, ethnicity, educational attainment, and religious affiliation. The belief status of respondents was assessed via their

response to the question "Have you ever in your life believed in God?", taken from the Religious Background and Behaviors Questionnaire (Connors et al., 1996). Participants responded with one of four possible answers including "yes, and I still do" (i.e., life-long religious believers), "Never" (i.e., life-long religious non-believers), "I didn't use to, but I do now" (i.e., former religious non-believers who now believe), and "I use to, but not now" (i.e., former religious believers who no longer believe).

We assessed Forgiveness of Others using a 6-item subscale of The Heartland Forgiveness Scale (HFS; Thompson et al., 2005). Participants were provided a 7-point Likert scale ranging from 1 ("almost always false of me") to 7 ("almost always true of me") that indicates the degree to which each item is true for the respondent, with higher scores indicating greater forgiveness of others. The HFS, and the other-forgiveness subscale, have demonstrated good internal consistency (α = .78 - .81; .79, respectively), and acceptable test-retest reliability (r = .83; 73) across a 3-week interval, among undergraduates, and the forgiveness of others subscale was positively associated with another measure of forgiveness of others (i.e., Multidimensional Forgiveness Inventory, r =.47, p < .001; Thompson et al., 2005).

The 6-item Gratitude Questionnaire (GQ-6; Mccullough et al., 2002) was used as a measure of dispositional gratitude (e.g., "If I had to list everything that I felt grateful for, it would be a very long list"). Participants rate their agreement with each statement using a 7-point Likert scale, with higher scores indicating greater gratitude. The GQ-6 has demonstrated good internal reliability (α = .80) and construct validity, including correlations with optimism (r = .28, p < .001), happiness (r = .31, p < .001), agreeableness (r = .42, p <.001), and extraversion (r = .11, p < .01), among Taiwanese college students (Chen et al., 2009). In a study of adult community members from China, the GQ also demonstrated satisfactory composite reliability

(CR = 0.87), and convergent validity with measures of life satisfaction ($\beta = 0.23$, $p < 0.001$) and affective well-being ($\beta = 0.19$, $p < 0.001$; Kong et al., 2017).

Humility was measured using the Comprehensive Intellectual Humility Scale (CIHS; Krumrei-Mancuso & Rouse, 2016), a 22-item measure consisting of four subscales. Items are rated on a 5-point Likert scale ranging from 1 (“strongly disagree”) to 5 (“strongly agree”), with higher scores indicating greater humility. The CIHS has demonstrated good internal reliability ($\alpha = .88$; Krumrei-Mancuso, 2018), acceptable test-retest reliability ($r = .75$ and $r = .70$ at 1 month and 3 month intervals, respectively), and construct validity as evidenced by correlations with intellectual openness ($r = .52$, $p < .001$), intellectual arrogance ($r = -.53$, $p < .001$) and other measures of humility (e.g., Landrum’s self-correction humility subscale, $r = .42$, $p < .001$), among a national community sample (Krumrei-Mancuso & Rouse, 2016).

The Religious and Spiritual Struggles Scale (RSSS; Exline, et al., 2014) was used as a measure of spiritual struggle. For 26 items, participants rated the extent to which they have experienced a given scenario, using a 5-point Likert scale ranging from 1 (“not at all”) to 5 (“a great deal”). The RSSS is comprised of six subscales including divine struggles, demonic struggles, interpersonal struggles, moral struggles, ultimate meaning, and doubt. The internal consistency of the RSSS is considered excellent ($\alpha = .91$), and convergent validity is supported by correlations with anger toward God ($r = .49$, $p < .01$) and religious fear and guilt ($r = .55$, $p < .01$) in a sample of community adults from the U.S. (Exline et al., 2014).

Statistical Analyses

All analyses were conducted using SPSS (version 25). Bivariate associations were assessed using Pearson product-moment correlation analyses. Multivariate associations were conducted utilizing the Process macro for SPSS (Hayes, 2013). In separate models, forgiveness,

gratitude, humility, and spiritual struggle were entered as the predictor variable and suicide risk was entered as the outcome variable. Religious belief status was entered as the moderator variable to assess differences in the effect of the predictor variable on the outcome variable across belief stats groups. Belief status was dummy coded automatically by Process to run the analyses. Age, gender, race/ethnicity, and education level were entered as covariates in all analyses, as previous research suggests that demographic variables may impact study variables (Krause, 2012; Orathinkal et al., 2008).

Results

At the bivariate level, spiritual struggle, including all subscales, was significantly associated with suicide risk, and both were negatively associated with forgiveness, gratitude, and humility. Forgiveness, gratitude, and humility were all positively associated (See Table 4.1).

Table 4.1

Bivariate Correlations

		1	2	3	4	5	6	7	8	9	10	11	*M*	*SD*
1.)	Forgiveness	.											23.48	4.82
2.)	Gratitude	.45											29.97	6.44
3.)	Humility	.45	.44										72.79	10.79
4.)	Spiritual Struggle Total	-.44	-.46	-.60									64.09	29.01
5.)	Divine Struggles	-.44	-.45	-.57	.94								12.07	6.13
6.)	Demonic Struggles	-.39	-.38	-.61	.94	.87							9.47	4.99
7.)	Interpersonal Struggles	-.40	-.44	-.58	.94	.85	.87						12.26	5.83
8.)	Moral Struggles	-.43	-.39	-.54	.94	.86	.86	.84					10.10	4.68
9.)	Doubt	-.41	-.42	-.52	.93	.86	.84	.85	.87				9.93	4.72
10.)	Ultimate Meaning	-.40	-.52	-.52	.91	.81	.80	.85	.83	.81			10.27	4.74
11.)	Suicide Risk	-.40	-.35	-.27	.58	.56	.52	.56	.55	.51	.57		8.80	5.21
12.)	Age	.23	.21*	.25	-.33	-.33	-.35	-.30	-.27	-.29	-.31	-.14*	30.85	16.90

Note: * Correlation significant at the .05 level. All other correlations are significant at the .001 level unless denoted by *.
M = Mean; *SD* = Standard Deviation
Forgiveness = forgiveness of others subscale of the Heartland Forgiveness Scale; Gratitude = Gratitude Questionnaire-6; Humility = Comprehensive Intellectual Humility Scale; Spiritual Struggle Total = Religious and Spiritual Struggles Scale; Numbers 5-10 indicate subscales of the Religious and Spiritual Struggles Scale; Suicide Risk = Suicidal Behavior Questionnaire-Revised

At the multivariate level, forgiveness ($B = -0.59$, $p < .01$, 95% CI [-.98, -.20]) and humility ($B = -0.17$, $p = .02$, 95% CI [-.31, -.03]) were negatively associated with suicide risk, and this effect did not differ based on religious belief status. Spiritual struggle, overall, was positively related to suicide risk for all belief groups ($B = 0.11$, $p < .01$, 95% CI [.07, .15]). All subscales of spiritual struggle were also positively associated to suicide risk, including divine struggles ($B = 0.44$, $p < .01$, 95% CI [.23, .65]), supernatural struggles ($B = 0.56$, $p < .01$, 95% CI [.29, .83]), interpersonal struggles ($B = 0.52$, $p < .01$, 95% CI [.30, .74]), moral struggles ($B = 0.61$, $p < .01$, 95% CI [.33, .89]), struggles of ultimate meaning ($B = 0.73$, $p < .01$, 95% CI [.44, 1.02]), and struggles of doubt ($B = 0.61$, $p < .01$, 95% CI [.33, .69]). None of the effects for the spiritual struggle subscales differed based on religious belief status. The effect of gratitude on suicide risk was moderated by religious belief status, such that the inverse association between gratitude and suicide risk was strongest for former religious non-believers who now believe ($B = -0.38$, $p = .04$, 95% CI [-.73, -.02]; See Figure 4.1).

Figure 4.1

The Interaction Effect Between Gratitude and Religious Belief Status on Suicide Risk

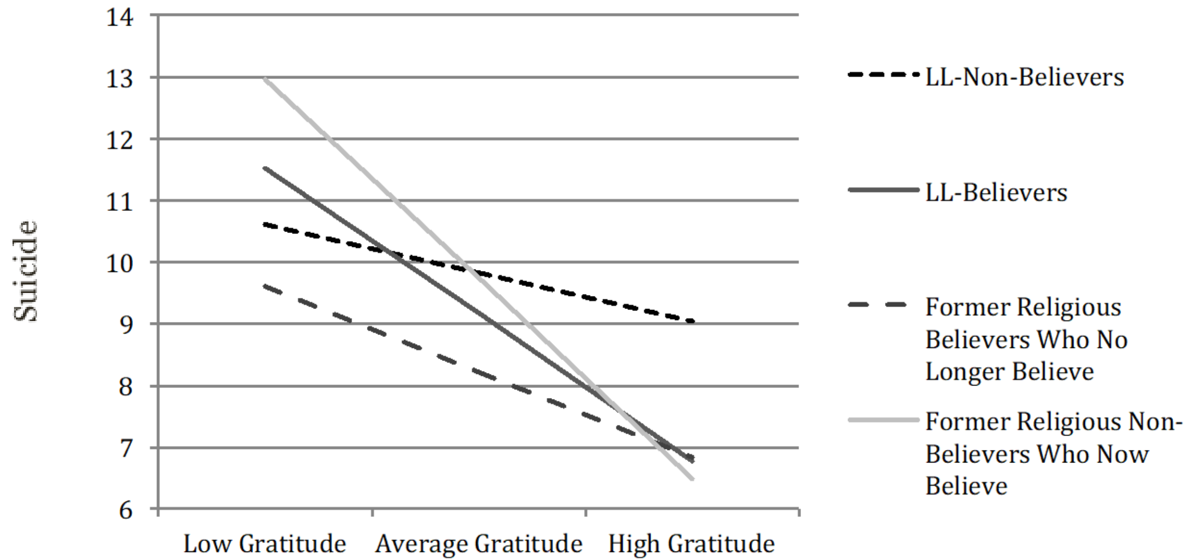

Figure 4.1. The moderating effect of religious belief status on the relation between gratitude (Gratitude Questionnaire - 6) and suicide risk (Suicidal Behaviors Questionnaire – Revised) at high (1 *SD* above the mean), average (mean), and low (1 *SD* below the mean) levels of gratitude.

Discussion

We examined the relation between forgiveness, gratitude, humility, and suicide risk, and between spiritual struggle and suicide risk, in a community sample of U.S. adults. We also investigated the moderating role of religious belief status, including being a life-long religious believer, former religious non-believer who now believes, former religious believer who no longer believes, or a life-long nonbeliever. Spiritual struggle, including all subscales, was associated with suicide risk, and this effect did not differ based on belief status. Both forgiveness and humility were associated with less suicide risk for all religious belief groups, and this effect did not differ between groups. In contrast, the relation between gratitude and suicide risk was moderated by religious belief status, such that this effect was strongest for former religious non-believers who now believe, compared to all other belief groups.

To begin, our findings align with previous research documenting a beneficial linkage between forgiveness and suicide risk (Kopacz et al., 2016). Further, this effect was not moderated by religious belief status, suggesting that the association between forgiveness and suicide risk is consistent across all belief groups. As a religiously oriented protective virtue, forgiveness may exert its effect on suicide risk directly but may also mitigate suicide risk indirectly via mediating variables (i.e., risk factors) relevant to all belief status groups. For example, according to the Interpersonal Theory of Suicide (Joiner, 2005), thwarted belongingness and perceived burdensomeness are risk factors for suicide. In a study of primary care patients ($N = 101$), forgiveness was directly related to less suicide risk, but was also indirectly associated, linked via less depression and fewer thwarted interpersonal needs (Nsamenang et al., 2013). Thus, although the development and expression of forgiveness may be facilitated by religious belief, its beneficial association with suicide risk appears to occur despite

the presence or absence of religiousness, perhaps due to its association with risk factors common among all belief groups, such as psychopathology and interpersonal dysfunction. Yet, this assertion is beyond the scope of our study and further research is needed to clarify the mechanisms of action linking forgiveness to reduced suicidality, including the ubiquity of this effect across members of diverse religious belief groups.

We also found that humility was inversely related to suicide risk, and this effect did not differ based on religious belief status. Humility is characterized as a lack of rigidity in the personal beliefs that one holds and an openness to alternative beliefs or ideas (Leary et al., 2017). Suicide, on the other hand, may be precipitated by rigid negative beliefs about the self or future (e.g., belief that one is unable to be loved, belief that one's future is hopeless; Bryan & Harris, 2019), which humility may help to attenuate. Previous theoretical work suggests that, like forgiveness, humility has a direct beneficial impact on mental health, but may also promote psychological wellbeing via numerous indirect pathways (Worthington & Allison, 2018). For example, Worthington et al. (2017) propose a theoretical model, whereby humility influences mental health through reduced stress, increased social support, and by fostering the development of other positive psychological virtues including forgiveness and gratitude. Although research in this area is in its infancy, our findings support the premise that humility exerts a beneficial effect on suicide risk that is broad enough in scope to be applicable despite the presence or absence of religiousness.

Next, we found that the beneficial association between gratitude and suicide risk was moderated by religious belief status, such that this effect was most robust for former religious non-believers who now believe. The beneficial effect of gratitude may be due, in part, to cognitive mechanisms underlying gratitude. For example, gratitude is a cognitive reappraisal

strategy, and grateful persons are more likely to evaluate life experiences, including negative life events, in a positive way (Rey et al., 2019). In previous research with suicide attempters, positive cognitive reappraisal buffered the association between stress and suicidal ideation ($N = 46$; Franz et al., 2021), and gratitude may exert a similar effect.

In addition, Emmons and McCullough (2003) note that gratitude involves acknowledging that a positive outcome has occurred and that the source of this outcome is external (i.e., outside of the self). In the context of religiousness, such outcomes may be attributed to God, and this tendency may be more pronounced for religious converts, due to religious saliency. For example, Rosmarin and colleagues (2011) differentiate between general gratitude (e.g., toward others) and religious gratitude (i.e., gratefulness toward God), finding that religious gratitude was more strongly associated with mental wellbeing, including greater happiness and life satisfaction, and reduced functional impairment due to depression, particularly for those with greater religious commitment. The target of one's attribution for positive outcomes may also contribute to the efficacy of the effect. Religious believers may be more likely to attribute positive outcomes to God, whereas religious non-believers may attribute such outcomes to other individuals or nature (e.g., grateful to medical providers for curing disease vs. feeling grateful to God; Kunst et al., 2000). This may be particularly true for former religious non-believers who now believe, as conversion to religious belief may enhance awareness of God's role in their life, thereby facilitating grateful attributions to God. Although this assertion has yet to be quantitatively assessed, previous qualitative accounts document a maturation of one's awareness and relation to God following religious conversion (Cohen, 2002).

Our findings also suggest that spiritual struggle, which encompasses divine struggles, demonic struggles, interpersonal struggles, moral struggles, struggles of ultimate meaning, and

struggles of doubt, was associated with suicide risk, and this effect did not differ between religious belief groups. Thus, the deleterious impact of spiritual struggle on suicide risk is not limited to those with religious or spiritual beliefs but may also vex religious non-believers. For religious non-believers, spiritual struggles may manifest as hypothetical concepts of God (e.g., a view of God as punishing) shaped by societal perceptions or due to difficult previous religious or spiritual experiences (Bradley et al., 2017). For instance, in previous clinical research, negative, distressing views of God were associated with suicide risk (Jongkind et al., 2019). Our findings also suggest that religious belief, whether life-long or adopted, does not protect against the deleterious impact of spiritual struggle on suicide risk, perhaps because spiritual struggles undermine the protective effect of religious beliefs. For example, spiritual struggles may result in negative emotions toward God (e.g., anger, resentment) and a subsequent, tenuous relationship with God, which may increase risk for suicide (Exline et al., 2013). Although characteristics of one's relationship with God have not been studied in the context of suicide, Thauvoye et al. (2018) found that individuals reporting a relationship with God characterized by insecure attachment were more likely to experience depressive symptoms than those with a secure attachment. Such patterns of results, including our findings, highlight potential pathways whereby the downstream effects of spiritual distress might be linked to suicidality, and indicate the consistency of this damaging association across religious belief groups.

Our novel results must be understood within the context of minor limitations, including the use of cross-sectional data, potential social desirability bias, and limited sample size for life-long religious non-believers and former religious non-believers who now believe. In future research, use of a prospective and longitudinal design would allow assessment of causal pathways in the linkage between religious risk and protective factors and suicidal thoughts and

behaviors, and the influence of changes in religious beliefs on these associations. Assessing social desirability (e.g., Balanced Inventory of Desirable Responding), and controlling for its effect, may counterbalance the potential for respondents to engage in positive impression management (Asgeirsdottir et al., 2016). Finally, in future research, sampling methodologies that maximize inclusion, such as oversampling elusive religious belief status groups (Snook et al., 2021), are needed to ensure sufficient analytic power.

Despite limitations, our findings offer several implications for suicide prevention and intervention strategies. Consistent with previous literature, both forgiveness and humility were associated with less suicide risk, and this beneficial effect occurred regardless of belief status.

Although research on forgiveness- and humility-based psychotherapy for suicide risk is limited, interventions focused on positive psychological traits are effective in reducing suicide risk factors and promoting protective characteristics (Hansen et al., 2009). In a meta-analysis of 15 randomized control trials among adolescent and adult samples, forgiveness-based interventions (e.g., forgiveness therapy, REACH forgiveness workbook) were efficacious in reducing depression, anger, hostility, and psychological distress, and increasing positive affect (Akhtar & Barlow, 2018). Similarly, Lavelock and colleagues (2014) developed a workbook (i.e., PROVE workbook) that was effective at increasing humility. In a later study, use of the 5-step PROVE workbook increased humility, forgiveness, and patience, and decreased negative affect, in both religious and non-religious participants (Lavelock et al., 2017).

Gratitude interventions have also been linked to positive outcomes, including reduced suicide risk, and our results suggest that such interventions may be particularly beneficial for religious believers. In a randomized control trial of psychiatric inpatients ($N = 201$), participants who were assigned to a gratitude diary intervention showed decreases in psychological pain,

suicidal ideation, and hopelessness, and increased optimism, compared to a control group (Ducasse et al., 2019). Relatedly, in a meta-analysis, gratitude interventions (e.g., gratitude diary) reduced depressive symptoms and increased general well-being (Sin & Lyubomirsky, 2009). When indicated, mental health providers should consider integrating such positive psychological strategies into their clinical practice, as these interventions may be useful in addressing suicide risk and should be effective regardless of religious background or beliefs.

Spiritual struggles have also become an increasing focus of the clinical literature. For example, religious cognitive behavior therapy (RCBT) and Winding Road, a 9-session, spiritually integrated treatment, are both effective in reducing spiritual struggles (Pearce & Koenig, 2016; Reist Gibbel et al., 2019). Participation in religious cognitive behavior therapy also resulted in enhanced optimism and reduced depressive symptoms among persons with chronic medical illness and major depression (Koenig et al., 2015). Although no research has examined whether interventions that address spiritual struggles also ameliorate suicide risk, our results provide preliminary evidence to support this assertion and, further, suggest that this salubrious effect occurs regardless of religious belief status. When appropriate, clinicians might consider addressing spiritual struggle as a potential source of underlying distress, for both religious and non-religious patients.

In sum, forgiveness and humility were associated with less suicide risk for members of all religious belief status groups, and the linkage between gratitude and suicide risk was moderated by religious belief status, such that the beneficial effect of gratitude on suicide risk was greatest for former religious non-believers who now believe. On the other hand, spiritual struggle was associated with increased suicide risk for all religious belief groups. Our results suggest that promoting positive psychological characteristics, and mitigating spiritual struggles,

may be important therapeutic goals for the reduction of suicide risk, despite the presence or absence of religiousness. However, understanding the role of initiating, maintaining, or transitioning between religious beliefs for psychological wellbeing remains a critical empirical and theoretical goal.

References

Aghababaei, N. (2014). God, the good life, and HEXACO: The relations among religion, subjective well-being and personality. *Mental Health, Religion & Culture*, *17*(3), 284–290. doi:10.1080/13674676.2013.797956

Akhtar, S., & Barlow, J. (2018). Forgiveness therapy for the promotion of mental well-being: A systematic review and meta-analysis. *Trauma, Violence, & Abuse, 19(1),* 107–122. doi:10.1177/1524838016637079

Asgeirsdottir, R. L., Vésteinsdóttir, V., & Thorsdottir, F. (2016). Short form development of the Balanced Inventory of Desirable Responding: Applying confirmatory factor analysis, item response theory, and cognitive interviews to scale reduction. *Personality and Individual Differences*, *96*, 212–221. doi:10.1016/j.paid.2016.02.083

Boggiss, A. L., Consedine, N. S., Brenton-Peters, J. M., Hofman, P. L., & Serlachius, A. S. (2020). A systematic review of gratitude interventions: Effects on physical health and health behaviors. *Journal of Psychosomatic Research*, *135,* 1 - 10. doi:10.1016/j.jpsychores.2020.110165

Bradley, D. F., Exline, J. J., & Uzdavines, A. (2017). Relational reasons for nonbelief in the existence of gods: An important adjunct to intellectual nonbelief. *Psychology of Religion and Spirituality*, *9*(4), 319-327. doi:10.1037/rel0000073

Brailovskaia, J., Teismann, T., Zhang, X. C., & Margraf, J. (2019). Grandiose narcissism, depression and suicide ideation in Chinese and German students. *Current Psychology*, 1–9. doi:10.1007/s12144-019-00355-1

Bryan, C. J., & Harris, J. A. (2019). The structure of suicidal beliefs: A Bifactor analysis of the Suicide Cognitions Scale. *Cognitive Therapy and Research*, *43*(2), 335–344. doi:10.1007/s10608-018-9961-2

Caribé, A. C., Studart, P., Bezerra-Filho, S., Brietzke, E., Noto, M. N., Vianna-Sulzbach, M., ... & Miranda-Scippa, Â. (2015). Is religiosity a protective factor against suicidal behavior in bipolar I outpatients? *Journal of Affective Disorders*, *186*, 156-161. doi:10.1016/j.jad.2015.07.024

Chen, L. H., Chen, M. Y., Kee, Y. H., & Tsai, Y. M. (2009). Validation of the gratitude questionnaire (GQ) in Taiwanese undergraduate students. *Journal of Happiness Studies*, *10*(6), 655–664. doi:10.1007/s10902-008-9112-7

Cohen M. (2002). Convergence: maturation and integration in the course of a religious conversion. *J Am Acad Psychoanal*, *30*(3), 383-400. doi: 10.1521/jaap.30.3.383.21969.

Connors, G. J., Tonigan, J. S., & Miller, W. R. (1996). A measure of religious background and behavior for use in behavior change research. *Psychology of Addictive Behaviors*, *10*(2), 90–96. https://doi.org/10.1037/0893-164X.10.2.90

Currier, J. M., McDermott, R. C., McCormick, W. H., Churchwell, M. C., & Milkeris, L. (2018). Exploring cross-lagged associations between spiritual struggles and risk for suicidal behavior in a community sample of military veterans. *Journal of Affective Disorders*, *230*, 93–100. doi:10.1016/j.jad.2018.01.009

Currier, J. M., Smith, P. N., & Kuhlman, S. (2017). Assessing the unique role of religious coping in suicidal behavior among U.S. Iraq and Afghanistan veterans. *Psychology of Religion and Spirituality*, *9*(1), 118–123. doi:10.1037/rel0000055

Davis, D. E., Hook, J. N., Worthington, E. L., Van Tongeren, D. R., Gartner, A. L., Ii, D. J. J., &

Emmons, R. A. (2011). Relational humility: Conceptualizing and measuring humility as a personality judgment. *Journal of Personality Assessment*, *93*(3), 225–234. doi:10.1080/00223891.2011.558871

Ducasse, D., Dassa, D., Courtet, P., Brand, A. V., Walter, A., Guillaume, S., Jaussent, I., & Olié, E. (2019). Gratitude diary for the management of suicidal inpatients: A randomized controlled trial. *Depression and Anxiety*, *36*(5), 400–411. doi:10.1002/da.22877

Emmons, R. A., & Crumpler, C. A. (2000). Gratitude as a human strength: Appraising the evidence. *Journal of Social and Clinical Psychology*, *19*(1), 56–69. doi:10.1521/jscp.2000.19.1.56

Emmons, R. A., & Kneezel, T. T. (2005). Giving thanks: Spiritual and religious correlates of gratitude. *Journal of Psychology and Christianity*, *24*(2), 140–148.

Emmons, R. A., & McCullough, M. E. (2003). Counting blessings versus burdens: An experimental investigation of gratitude and subjective well-being in daily life. *Journal of Personality and Social Psychology*, *84*(2), 377–389. doi:10.1037/0022-3514.84.2.377

Escher, D. (2013). How does religion promote forgiveness? Linking beliefs, orientations, and practices. *Journal for the Scientific Study of Religion*, *52*(1), 100–119. doi:10.1111/jssr.12012

Exline, J. J., Pargament, K. I., Grubbs, J. B., & Yali, A. M. (2014). The Religious and Spiritual Struggles Scale: Development and initial validation. *Psychology of Religion and Spirituality*, *6*(3), 208–222. doi:10.1037/a0036465.supp

Exline, J. J., Prince-Paul, M., Root, B. L., & Peereboom, K. S. (2013). The spiritual struggle of anger toward God: A study with family members of hospice patients. *Journal of Palliative Medicine*, *16*(4), 369–375. doi:10.1089/jpm.2012.0246

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, NY: Guilford Press.

Exline, J. J., Van Tongeren, D. R., Bradley, D. F., Wilt, J. A., Stauner, N., Pargament, K. I., & DeWall, C. N. (2020). Pulling away from religion: Religious/spiritual struggles and religious disengagement among college students. *Psychology of Religion and Spirituality*. Advanced online publication. doi:10.1037/rel0000375

Fisher, A. R. (2017). A review and conceptual model of the research on doubt, disaffiliation, and related religious changes. *Psychology of Religion and Spirituality*, *9*(4), 358–367. doi:10.1037/rel0000088

Franz, P. J., Kleiman, E. M., & Nock, M. K. (2021). Reappraisal and suppression each moderate the association between stress and suicidal ideation: Preliminary evidence from a daily diary study. *Cognitive Therapy and Research*. https://doi.org/10.1007/s10608-021-10214-8

Gorsuch, R. L., & Hao, J. Y. (1993). Forgiveness: An exploratory factor analysis and its relationships to religious variables. *Review of Religious Research*, *34*(4), 333. doi:10.2307/3511971

Hall, B. B., Webb, J. R., & Hirsch, J. K. (2020). Spirituality and suicidal behavior: The mediating role of self-forgiveness and psychache. *Psychology of Religion and Spirituality*, 12(1), 36–44. doi:10.1037/rel0000182

Hansen, M. J., Enright, R. D., Baskin, T. W., & Klatt, J. (2009). A palliative care intervention in forgiveness therapy for elderly terminally ill cancer patients. *Journal of Palliative Care*, *25*(1), 51–60. doi:10.1177/082585970902500106

Hayes, A. (2013). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach.* New York, NY: Guildford Press.

Hedegaard, H., Curtin S. C., & Warner M. (2020). Increase in suicide mortality in the United States, 1999–2018. *NCHS Data Brief, no 362*. Hyattsville, MD: National Center for Health Statistics.

Heisel, M. J., Links, P. S., Conn, D., van Reekum, R., & Flett, G. L. (2007). Narcissistic personality and vulnerability to late-life suicidality. *The American Journal of Geriatric Psychiatry : Official Journal of the American Association for Geriatric Psychiatry*, *15*(9), 734–741. doi:10.1097/JGP.0b013e3180487caa

Hook, J. N., & Davis, D. E. (2014). Humility, religion, and spirituality: Introduction to the special issue. *Journal of Psychology and Theology*, *42*(1), 3–6. doi:10.1177/009164711404200101

Jaksic, N., Marcinko, D., Hanzek, M. S., Rebernjak, B., & Ogrodniczuk, J. S. (2017). Experience of shame mediates the relationship between pathological narcissism and suicidal ideation in psychiatric outpatients. *Journal of Clinical Psychology*, *73*(12), 1670–1681. doi:10.1002/jclp.22472

Jankowski, P. J., Sandage, S. J., & Hill, P. C. (2013). Differentiation-based models of forgivingness, mental health and social justice commitment: Mediator effects for differentiation of self and humility. *The Journal of Positive Psychology*, *8*(5), 412–424. doi:10.1080/17439760.2013.820337

Joiner, T. (2005). *Why people die by suicide*. Cambridge, MA: Harvard University Press.

Jongkind, M., Van Den Brink, B., Schaap, J. H., Van Den Velde, N., & Braam, A. W. (2019). Dimensions of religion associated with suicide attempt and suicide ideation in depressed,

religiously affiliated patients. *Suicide and Life-Threatening Behavior*, *49*(2), 505–519. doi:10.1111/sltb.12456

Kleiman, E. M., Adams, L. M., Kashdan, T. B., & Riskind, J. H. (2013). Grateful individuals are not suicidal: Buffering risks associated with hopelessness and depressive symptoms. *Personality and Individual Differences*, *55*, 595–599. doi:10.1016/j.paid.2013.05.002

Kleiman, E. M., & Liu, R. T. (2018). An examination of the prospective association between religious service attendance and suicide: Explanatory factors and period effects. *Journal of Affective Disorders, 225,* 618–623. doi:10.1016/j.jad.2017.08.083

Koenig, H. G., Berk, L. S., Daher, N. S., Pearce, M. J., Bellinger, D. L., Robins, C. J., Nelson, B., Shaw, S. F., Cohen, H. J., & King, M. B. (2014). Religious involvement is associated with greater purpose, optimism, generosity and gratitude in persons with major depression and chronic medical illness. *Journal of Psychosomatic Research*, *77*(2), 135–143. doi:10.1016/j.jpsychores.2014.05.002

Koenig, H. G., Pearce, M. J., Nelson, B., & Daher, N. (2015). Effects of religious versus standard cognitive-behavioral therapy on optimism in persons with major depression and chronic medical illness. *Depression and Anxiety*, *32*(11), 835–842. https://doi.org/10.1002/da.22398

Kong, F., You, X., & Zhao, J. (2017). Evaluation of the Gratitude Questionnaire in a Chinese sample of adults: Factorial validity, criterion-related validity, and measurement invariance across sex. *Frontiers in Psychology*, 8(1). doi: 10.3389/fpsyg.2017.01498

Kopacz, M. S., Currier, J. M., Drescher, K. D., & Pigeon, W. R. (2016). Suicidal behavior and spiritual functioning in a sample of veterans diagnosed with PTSD. *Journal of Injury & Violence Research*, *8*(1), 6–14. doi: 10.5249/jivr.v8i1.728

Krause, N. (2009). Religious involvement, gratitude, and change in depressive symptoms over time. *International Journal for the Psychology of Religion*, *19*(3), 155–172. https://doi.org/10.1080/10508610902880204

Krause, N. (2010). Religious involvement, humility, and self-rated health. *Social Indicators Research*, *98*(1), 23–39. doi:10.1007/s11205-009-9514-x

Krause, N. (2012). Feelings of gratitude toward God among older whites, older African Americans, and older Mexican Americans. *Research on Aging*, *34*(2), 156–173. doi:10.1177/0164027511417884

Krause, N. (2014). Exploring the relationships among humility, negative interaction in the church, and depressed affect. *Aging and Mental Health*, *18*(8), 970–979. doi:10.1080/13607863.2014.896867

Krause, N., Pargament, K. I., Hill, P. C., & Ironson, G. (2016). Humility, stressful life events, and psychological well-being: Findings from the Landmark Spirituality and Health Survey. *The Journal of Positive Psychology*, *11*(5), 499–510. doi:10.1080/17439760.2015.1127991

Krumrei-Mancuso, E. J., & Rouse, S. V. (2016). The development and validation of the Comprehensive Intellectual Humility Scale. *Journal of Personality Assessment*, *98*, 209-221. doi:10.1080/00223891.2015.1068174

Krysinska, K., Lester, D., Lyke, J., & Corveleyn, J. (2015). Trait gratitude and suicidal ideation and behavior: An exploratory study. *Crisis: The Journal of Crisis Intervention and Suicide Prevention, 36(4),* 291–296. doi:10.1027/0227-5910/a000320

Kunst, J. L., Bjorck, J. P., & Tan, S.-Y. (2000). Causal attributions for uncontrollable negative events. *Journal of Psychology and Christianity*, *19*(1), 47–60.

Lambert, N. M., Fincham, F. D., Braithwaite, S. R., Graham, S. M., & Beach, S. R. H. (2009). Can prayer increase gratitude? *Psychology of Religion and Spirituality*, *1*(3), 139–149. doi:10.1037/a0016731

Lavelock, C. R., Griffin, B. J., Worthington, E. L., Benotsch, E. G., Lin, Y., Greer, C. L., Garthe, R. C., Coleman, J. A., Hughes, C. M., Davis, D. E., & Hook, J. N. (2016). A qualitative review and integrative model of gratitude and physical health. *Journal of Psychology and Theology*, *44*(1), 55–86. doi:10.1177/009164711604400105

Lavelock, C. R., Worthington, E. L., Davis, D. E., Griffin, B. J., Reid, C. A., Hook, J. N., & Van Tongeren, D. R. (2014). The quiet virtue speaks: An intervention to promote humility. *Journal of Psychology and Theology*, 42(1), 99–110. doi:10.1177/009164711404200111

Lavelock, C. R., Worthington, E. L., Griffin, B. J., Garthe, R. C., Elnasseh, A., Davis, D. E., & Hook, J. N. (2017). Still waters run deep: Humility as a master virtue. *Journal of Psychology and Theology*, *45*(4), 286–303. doi:10.1177/009164711704500404

Li, D., Zhang, W., Li, X., Li, N., & Ye, B. (2012). Gratitude and suicidal ideation and suicide attempts among Chinese adolescents: Direct, mediated, and moderated effects. *Journal of Adolescence*, *35*(1), 55–66. doi:10.1016/j.adolescence.2011.06.005

Marriott, R. J., Hall, M. E. L., & Decker, L. A. (2019). Psychological correlates of reasons for nonbelief: Tolerance of ambiguity, intellectual humility, and attachment. *Mental Health, Religion & Culture*, *22*(5), 480–499. doi:10.1080/13674676.2019.1625313

McCullough, M. E., Emmons, R. A., & Tsang, J.-A. (2002). The grateful disposition: A conceptual and empirical topography. *Journal of Personality and Social Psychology, 82*(1), 112 – 127. doi:10.1037/0022-3514.82.1.112

Nishi, D., Susukida, R., Kuroda, N., & Wilcox, H. C. (2017). The association of personal importance of religion and religious service attendance with suicidal ideation by age group in the National Survey on Drug Use and Health. *Psychiatry Research, 255,* 321–327. doi:10.1016/j.psychres.2017.06.007

Nsamenang, S. A., Webb, J. R., Cukrowicz, K. C., & Hirsch, J. K. (2013). Depressive symptoms and interpersonal needs as mediators of forgiveness and suicidal behavior among rural primary care patients. *Journal of Affective Disorders*, 149(1–3), 282–290. doi:10.1016/j.jad.2013.01.042

Olson, R., Knepple Carney, A., & Hicks Patrick, J. (2019). Associations between gratitude and spirituality: An experience sampling approach. *Psychology of Religion and Spirituality, 11(4),* 449–452. doi10.1037/rel0000164.supp

Orathinkal, J., Vansteenwegen, A., & Burggraeve, R. (2008). Are demographics important for forgiveness? *The Family Journal*, *16*(1), 20–27. doi:10.1177/1066480707309542

Pescosolido, B. A., & Georgianna, S. (1989). Durkheim, suicide, and religion: Toward a network theory of suicide. *American Sociological Review*, *54*(1), 33 – 48. doi:10.2307/2095660

Reist Gibbel, M., Regueiro, V., & Pargament, K. I. (2019). A spiritually integrated intervention for spiritual struggles among adults with mental illness: Results of an initial evaluation. *Spirituality in Clinical Practice*, *6*(4), 240–255. doi:10.1037/scp0000207

Rey, L., Quintana-Orts, C., Mérida-López, S., & Extremera, N. (2019). Being bullied at school: Gratitude as potential protective factor for suicide risk in adolescents. *Frontiers in Psychology*, *10*(662), 1 - 10. doi:10.3389/fpsyg.2019.00662

Root Luna, L. M., Van Tongeren, D. R., & Witvliet, C. vanOyen. (2017). Virtue, positive psychology, and religion: Consideration of an overarching virtue and an underpinning

mechanism. *Psychology of Religion and Spirituality*, *9*(3), 299–302. doi:10.1037/rel0000127

Rosmarin, D. H., Pirutinsky, S., Cohen, A. B., Galler, Y., & Krumrei, E. J. (2011). Grateful to God or just plain grateful? A comparison of religious and general gratitude. *The Journal of Positive Psychology, 6(5),* 389–396. doi:10.1080/17439760.2011.596557

Sansone, R. A., Kelley, A. R., & Forbis, J. S. (2013). The relationship between forgiveness and history of suicide attempt. *Mental Health, Religion & Culture*, *16*(1), 31–37. doi:10.1080/13674676.2011.643860

Sharma, V., Marin, D. B., Koenig, H. K., Feder, A., Iacoviello, B. M., Southwick, S. M., & Pietrzak, R. H. (2017). Religion, spirituality, and mental health of US military veterans: Results from the National Health and Resilience in Veterans Study. *Journal of Affective Disorders, 217,* 197–204. doi:10.1016/j.jad.2017.03.071

Sin, N. L., & Lyubomirsky, S. (2009). Enhancing well-being and alleviating depressive symptoms with positive psychology interventions: A practice-friendly meta-analysis. *Journal of Clinical Psychology*, *65*(5), 467–487. doi:10.1002/jclp.20593

Sirois, F. M., & Wood, A. M. (2017). Gratitude uniquely predicts lower depression in chronic illness populations: A longitudinal study of inflammatory bowel disease and arthritis. *Health Psychology*, *36*(2), 122–132. doi:10.1037/hea0000436

Snook, D. W., Branum-Martin, L., & Horgan, J. G. (2021, May 27). Zeal of the convert? Comparing religiousness between convert and nonconvert Muslims. *Psychology of Religion and Spirituality*. Advance online publication. doi:10.1037/rel0000421

Thauvoye, E., Granqvist, P., Golovchanova, N., & Dezutter, J. (2018). Attachment to God, depression and loss in late life: A longitudinal study. *Mental Health, Religion &*

Culture, *21*(8), 825–837. doi:10.1080/13674676.2018.1552671

Thompson, L. Y., Snyder, C. R., Hoffman, L., Michael, S. T., Rasmussen, H. N., Billings, L., Heinze, L., Nuefeld, J. E., Shorey, H. S., Roberts, J. C., & Roberts, D. E. (2005). Dispositional forgiveness of self, others, and situations. *Journal of Personality*, *73*(2), 313–360. doi:10.1111/j.1467-6494.2005.00311.x

Trevino, K. M., Balboni, M., Zollfrank, A., Balboni, T., & Prigerson, H. G. (2014). Negative religious coping as a correlate of suicidal ideation in patients with advanced cancer. *Psycho-Oncology*, *23*(8), 936–945. doi:10.1002/pon.3505

Voas, D., & Chaves, M. (2016). Is the United States a counterexample to the secularization thesis? *American Journal of Sociology*, 121(5), 1517–1556. doi:10.1086/684202

Webb, J. R., Hirsch, J. K., & Toussaint, L. (2015). Forgiveness as a positive psychotherapy for addiction and suicide: Theory, research, and practice. *Spirituality in Clinical Practice*, *2*(1), 48–60. doi:10.1037/scp0000054

Wilt, J. A., Takahashi, J. T., Yun, D., Jeong, P., Exline, J. J., & Pargament, K. I. (2021). A mixed-methods study of communing with and complaining to the divine: Imagined conversations with god among undergraduates reporting religious and spiritual struggles. *Psychology of Religion and Spirituality*. doi:10.1037/rel0000405

Worthington, E. L., & Allison, S. T. (2018). Humility, mental health, and physical health. In E. L. Worthington, & S. T. Allison, *Heroic humility: What the science of humility can say to people raised on self-focus* (pp. 91–103). American Psychological Association. Washington, DC. doi:10.1037/0000079-006

Worthington, E. L., Davis, D. E., & Hook, J. N. (2017). *Handbook of humility: Theory, research, and applications* (E. L. Worthington Jr., D. E. Davis, & J. N. Hook (Eds.)). Routledge/Taylor & Francis Group. New York, NY. doi:10.4324/978131566046

Chapter 5. Manuscript 3

Spiritual Struggle and Suicide Risk across Varying Religious Belief Statuses: The Role of Positive Psychological Virtues

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Keywords: suicide, forgiveness, gratitude, humility, spiritual struggle

Abstract

Spiritual struggle is a well-established risk factor for suicide and may impact both religious believers and non-believers. In contrast, forgiveness, gratitude, and humility are religiously oriented virtues theorized to mitigate suicide risk. Socio-demographic trends toward religious decline in the U.S. have resulted in a diverse array of belief status groups, including life-long religious believers, life-long religious non-believers, former religious believers who no longer believe, and former religious non-believers who now believe, and it is unknown how religious risk and protective factors for suicide function across these groups. In a community sample ($N = 211$), we examined the association between spiritual struggle and suicide risk, and the moderating effects of forgiveness, gratitude, humility, and religious belief status. Results suggest that the protective effect of gratitude and humility on the association between spiritual struggle and suicide risk differs based on religious belief status, such that religious conversion may facilitate greater buffering. Our findings suggest that the impact of religious transitions on spiritual struggle and suicide risk should be considered within a therapeutic context, and that positive psychological interventions may be effective in mitigating suicide risk in the context of spiritual distress.

Spiritual Struggle and Suicide Risk across Varying Religious Belief Statuses: The Role of Positive Psychological Virtues

Suicide is a leading cause of preventable mortality accounting for more than 47,000 deaths in the U.S. annually (Hedegaard et al., 2020). Research on suicide prevention has identified an array of risk and protective factors, including religious and spiritual contributors to suicide risk. Although much of the literature on religiousness and suicide has highlighted the protective role of religion, more recent research has acknowledged the potential deleterious impact that spiritual conflict may have on suicide risk (Currier et al., 2017). Spiritual struggle is conceptualized as cognitive or emotional disruption and distress related to one's religious functioning (Exline et al., 2014), and has a negative impact on health and wellbeing, including suicide risk (Raines et al., 2017). Yet, little is known about the association between beneficial religious factors (e.g., virtues) and negative spiritual experiences (i.e., spiritual struggle), nor their interrelations with mental health outcomes. For example, the virtues of forgiveness, gratitude, and humility are theorized to serve as mechanisms of action in the link between religiousness and mental health (Webb et al., 2013; Worthington et al., 2017). Although the religious value of these virtues and their relation to suicide has been widely documented, the degree to which these religious virtues may mitigate the effects of spiritual struggle on suicide risk has yet to be explored.

Adding to the complexity of the association between religion and suicide, the U.S. has experienced shifts in the distribution of religious beliefs and affiliation in recent decades, with the most prominent trends indicating a decline in religious belief (Voas & Chaves, 2016). Still, most research on religiousness and health has neglected the impact that changes in religious belief may have. That is, the impact of religious deconversion (i.e., former religious believers

who no longer believer) or conversion (i.e., former religious non-believers who now believe), compared to individuals with life-long beliefs (i.e., life-long religious believer, life-long religious non-believers), on health-related outcomes, including suicide, has been largely unexplored. To that end, we examined the potential moderating effect of forgiveness, gratitude, and humility on the association between spiritual struggle and suicide risk. Further, in a moderated moderation analysis, we assessed potential differences in the mitigating role of these positive psychological virtues, across belief status groups, for the linkage between spiritual struggle and suicide risk.

Characterized by interpersonal or intrapersonal conflict in one's religious beliefs, practices, or values, spiritual struggle is comprised of divine struggles, demonic struggles, interpersonal struggles, struggles of ultimate meaning, moral struggles, and struggles of doubt, and is associated with an array of poor physical and mental health outcomes, including suicide (Exline et al., 2014). The relation between spiritual struggle and suicide has been documented among college students (Exline et al., 2000; Johnson & Hayes, 2003), veterans (Currier et al., 2017; Raines et al., 2017), and cancer patients (Trevino et al., 2014). Of note, recent research on spiritual struggle highlights its potential impact on both religious believers and non-believers and suggests that such struggles may serve as a catalyst for religious non-belief (Bradley et al., 2018). Thus, the shifts in religious belief status in the U.S. are an important consideration for the study of spiritual struggle and its impact on suicide.

In contrast to spiritual struggle, forgiveness has a salubrious association with religiousness and suicide risk. A greater disposition to forgive has been directly and indirectly associated with suicide risk among veterans (Kopacz et al., 2016), college students (Hirsch et al., 2011), and primary care patients (Kelliher Rabon et al., 2019). Fewer studies exist that examine the buffering effect of forgiveness on risk factors for suicide. Among adolescents, forgiveness

buffered the effect of depression on suicide ideation for boys, but not girls, suggesting sex differences in its protective role (Quintana-Orts, 2018). Similarly, in a study of college students, forgiveness of self, but not forgiveness of others, mitigated the impact of anger expression on suicide risk (Hirsch et al., 2012). What is unknown, however, is whether the protective function of forgiveness differs because of religious belief status.

Like forgiveness, gratitude is considered a central tenet of mainstream religions with well-documented benefits for health and well-being, including reduced suicidality (Emmons & Crumpler, 2000; Hill et al., 2013). For example, in a study of Chinese adolescents ($N = 1252$), gratitude was associated with past suicidal ideation and attempts (Li et al., 2012) and, similarly, in a longitudinal study of college students, gratitude was associated with less suicidal ideation (Kleiman et al., 2013b). Finally, in another collegiate study by Kleiman et al. (2013a), gratitude moderated the association between hopelessness, depressive symptoms, and suicide ideation and intent, indicating its role as a buffer of suicide risk. Still, gaps in the literature remain concerning the interrelations between gratitude, suicide, and religious beliefs. Importantly, although gratitude is closely associated with religious doctrines, it is not exclusive to religious individuals and little is known about how the presence or absence of religious belief, or changes in belief status, influence the development and expression of gratitude.

Finally, humility is an emerging focus of study in the field of positive psychology; however, the linkage between humility and health has been under-investigated, including its association with suicide risk (Davis et al., 2010). Nevertheless, preliminary explorations of humility yield promising evidence for its potential protective influence on wellbeing, including psychological health. For example, in a study of multiracial respondents, humility was negatively related to depressive symptoms (Franco & McElroy-Heltzel, 2019) and, in a collegiate study,

mediated the link between forgiveness and depression (Jankowski et al., 2013). Similarly, in a national sample of adults, humility mitigated the deleterious impact of stressful life events on depressed affect and symptoms of anxiety (Krause et al., 2016). Regarding religious belief status, Krause (2014) found that humility buffered the effect of negative religious interaction on depressed affect, for religious believers, but this premise has not been assessed in other belief status groups, nor with suicide risk as an outcome.

As such, in a sample of community adults, we examined the moderating role of forgiveness, gratitude, and humility, as buffers of the relation between spiritual struggle, including all facets of spiritual struggle, and suicide risk. Given the shifting religious landscape of the U.S., it is also important to better understand the potential effects of religious changes on mental health and well-being. Thus, in a moderated-moderation model, we examined the impact of belief status on the relation between spiritual struggle and suicidality, and on the protective effects of forgiveness, gratitude, and humility.

Methods

Participants

Participants for this study ($N = 361$) were part of a larger study investigating the association between positive psychological characteristics and mental health. After excluding participants with missing data (n = 150) using listwise deletion, a total of 211 remaining respondents were included in our analyses. Respondents self-identified as male (n = 139, 65.9%), female (n = 71, 33.6%), and other (n = 1, 0.5%), and were predominantly White (n = 125, 59.2%), followed by Asian (n = 37, 17.5%), African American (n = 22, 10.4%), Hispanic (n = 15, 7.1%), Native American (n = 10, 4.7%), and Native Hawaiian/other Pacific Islander (n = 2, 0.9%). Most participants identified as former religious believers who no longer believe (n = 82,

38.9%), followed by life-long religious believers (n = 54, 25.6%), former religious non-believers who now believe (n = 38, 18.0%), and life-long religious non-believers (n = 37, 17.5%). The average age of participants was 30.95 years (SD = 16.88).

Measures

Participants provided demographic information including age, sex, ethnicity, and educational attainment, which were used as covariates. A single item from the Religious Background and Behaviors Questionnaire (Connors et al., 1996) was used to assess participant's belief status. Participants responded to the question "Have you ever in your life believed in God?" with one of four responses: "yes, and I still do" (Life-long believers), "yes, in the past but not now" (Former believers who no longer believe), "I didn't use to, but I do now" (Former non-believers who now believe), and "Never" (Life-long non-believers).

The Religious and Spiritual Struggles Scale (RSSS; Exline et al., 2014) was used to measure spiritual struggle. Items (e.g., "Felt as though God had let me down," "Had conflicts with other people about religious/spiritual matters") are rated on a 5-point Likert scale ranging from 1 ("not at all") to 5 ("a great deal"), with higher scores indicating greater spiritual struggle. The RSSS produces an overall score and scores for six subscales, including divine struggles, demonic struggles, interpersonal struggles, moral struggles, ultimate meaning, and doubt. The RSSS has demonstrated excellent internal consistency (Cronbach's alpha (α) = .91), and convergent validity including correlations with anger toward God (Spearman (r) = .49, $p < .01$) and religious fear and guilt ($r = .55$, $p < .01$), in a sample of community adults from the U.S. (Exline et al., 2014).

The Suicidal Behaviors Questionnaire-Revised (SBQ-R; Osman et al., 2001) was used to assess suicide risk and includes 4 items that assess lifetime suicide ideation and attempt, past

year suicide ideation, communication of suicide intent, and likelihood of future suicide attempts. For items 1 through 3, participants respond to items using a 5-point Likert-type scale ranging from 1 to 5, indicating frequency of engagement in the behavior. Item responses are specific to each item (e.g., "have you ever thought about or attempted to kill yourself") and reflect a range of severity (e.g., "never"; "it was just a brief passing thought"; "I have attempted to kill myself, and really wanted to die"). Item 4 is rated on a 7-point Likert-type scale ranging from 0 ("Never") to 6 ("Very likely"). Potential scores on the SBQ-R range from 3-18, and higher scores are indicative of greater suicide risk. The SBQ-R has demonstrated acceptable internal consistency ($\alpha = .76$) and convergent validity via its correlation with hopelessness ($r = .36$, $p < .001$), the Reasons for Living Inventory ($r = -.48$, $p < .001$), depression ($r = .33$, $p < .001$) and anxiety ($r = .23$, $p < .001$; Aloba et al., 2017; Rueda-Jaimes et al., 2017).

Forgiveness of others was measured using a 6-item subscale of the Heartland Forgiveness Scale (HFS; Thompson et al., 2005). Items on this HFS subscale are answered on a 7-point Likert scale ranging from 1 ("almost always false of me") to 7 ("almost always true of me") with higher scores indicating greater forgiveness of others. The HFS forgiveness of others subscale has shown acceptable internal consistency ($r = .79$), test-retest reliability over a three-week period ($r = .73$), and a positive association with the Multidimensional Forgiveness Inventory ($r =.47$, $p < .001$), among college students (Thompson et al., 2005).

The Gratitude Questionnaire – 6 (GQ-6; Mccullough et al., 2002) was used to measure dispositional gratitude. Participants responded to six items using a 7-point Likert scale, ranging from 1 ("strongly disagree") to 7 ("strongly agree"), with higher scores reflecting greater gratitude. The GQ has demonstrated good internal reliability ($\alpha = .80$) and construct validity, via

its correlations with optimism ($r = .28$, $p < .001$), happiness ($r = .31$, $p < .001$), agreeableness ($r = .42$, $p <.001$), and extraversion ($r = .11$, $p < .01$; Chen et al., 2009).

Humility was measured using the 22-item Comprehensive Intellectual Humility Scale (CIHS; Krumrei-Mancuso & Rouse, 2016). Items are rated on a 5-point Likert scale ranging from 1 ("strongly disagree") to 5 ("strongly agree"), with higher scores indicating greater humility. The CIHS has demonstrated good internal reliability ($\alpha = .88$; Krumrei-Mancuso, 2018), acceptable test-retest reliability ($r = .70$ - $.75$) over a one-month period, and construct validity as evidenced by correlations with intellectual openness ($r = .52$, $p < .001$), intellectual arrogance ($r = -.53$, $p < .001$) and other measures of humility (e.g., Landrum's self-correction humility subscale, $r = .42$, $p < .001$), in a national sample (Krumrei-Mancuso & Rouse, 2016).

Statistical Analyses

Using SPSS (version 25), Pearson product-moment correlations were utilized to assess independence of, and associations between, study variables. All multivariate analyses were conducted utilizing the Process macro for SPSS (Hayes, 2013). In separate models, spiritual struggle, and its subscales, were assessed as predictors of suicide risk, which served as the outcome variable for all analyses. Forgiveness, gratitude, and humility were assessed as moderator variables, in independent models, to determine their potential buffering effects.

Religious belief status was included as a second moderator, to determine the impact of maintaining or changing religious belief on the potential protective effects being exerted by these positive psychological virtues, for the linkage between spiritual struggle and suicide risk (See Figure 5.1 for a visual model). In all analyses, age, sex, race/ethnicity, and educational attainment were included as covariates.

Figure 5.1

A model of the hypothesized moderated moderation effects.

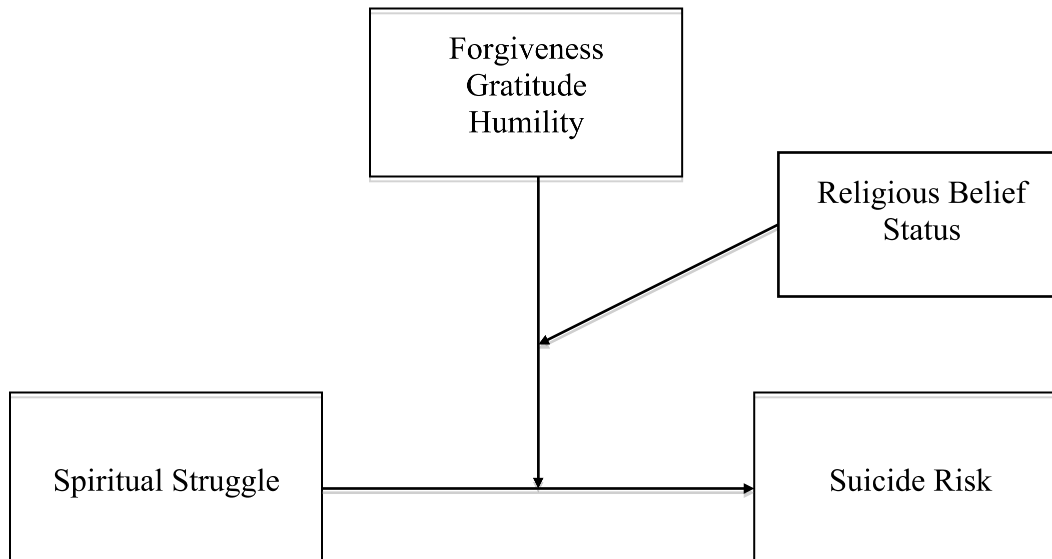

Figure 5.1. A moderated moderation model showing the effect of forgiveness, gratitude, and humility, in separate models, on the link between spiritual struggle (including all subscales) and suicide risk, conditional upon the effect of religious belief status.

Results

At the bivariate level, spiritual struggle, including all subscales, was positively associated with suicide risk, and both suicide risk and spiritual struggle were inversely associated with forgiveness, gratitude, and humility. Forgiveness, gratitude, and humility were each positively associated (See Table 5.1).

Table 5.1

Bivariate Correlations

		1	2	3	4	5	6	7	8	9	10	11	*M*	*SD*
1.)	Forgiveness	.											23.49	4.84
2.)	Gratitude	.45											30.01	6.47
3.)	Humility	.45	.44										72.89	10.83
4.)	Spiritual Struggle Total	-.44	-.46	-.60									63.67	28.97
5.)	Divine Struggles	-.44	-.45	-.57	.94								11.99	6.12
6.)	Demonic Struggles	-.39	-.38	-.61	.94	.87							9.39	4.98
7.)	Interpersonal Struggles	-.40	-.44	-.58	.94	.85	.87						12.16	5.81
8.)	Moral Struggles	-.43	-.39	-.54	.94	.86	.86	.84					10.03	4.67
9.)	Doubt	-.41	-.42	-.52	.93	.86	.84	.85	.87				9.90	4.72
10.)	Ultimate Meaning	-.40	-.52	-.52	.91	.81	.80	.85	.83	.81			10.20	4.73
11.)	Suicide Risk	-.40	-.35	-.27	.58	.56	.52	.56	.55	.51	.57		8.70	5.16
12.)	Age	.23	.21*	.25	-.33	-.33	-.35	-.30	-.27	-.29	-.31	-.14*	30.95	16.89

Note: All correlations significant at the .001 level (two-tailed) unless denoted with *, indicating significance at the .05 level.
M = Mean; *SD* = Standard Deviation
Forgiveness = forgiveness of others subscale of the Heartland Forgiveness Scale; Gratitude = Gratitude Questionnaire-6; Humility = Comprehensive Intellectual Humility Scale; Spiritual Struggle Total = Religious and Spiritual Struggles Scale; Numbers 5-10 indicate subscales of the Religious and Spiritual Struggles Scale; Suicide Risk = Suicidal Behaviors Questionnaire-Revised.

At the multivariate level, in separate models, we examined the moderating effect of forgiveness, gratitude, and humility on the association between spiritual struggle, including all subscales of spiritual struggle, followed by analyses of a potential three-way interaction (i.e., moderated moderation) between religious belief status and forgiveness, gratitude, and humility, on the link between spiritual struggle and suicide risk. Forgiveness significantly moderated the relation between demonic struggles and suicide risk (B = -0.04, p = .04, 95% CI [-.07, -.01]), between interpersonal struggles and suicide risk (B = -0.03, p = .04, 95% CI [-.06, -.01]), and between struggles of doubt and suicide risk (B = -0.03, p = .05, 95% CI [-.07, -.01]). This effect was consistent across all groups, as there were no significant three-way interactions observed for forgiveness.

Gratitude significantly moderated the link between demonic struggles and suicide risk (B = -0.5, p = .02, 95% CI [-.09, -.01]), and this effect was moderated by religious belief status, such that the effect of gratitude on the association between demonic struggle and suicide risk was only significant for former religious non-believers who now believe (B = -0.10, p = .02, 95% CI [-.18, -.01]). Similarly, gratitude moderated the relation between moral struggles and suicide risk (B = -0.12, p = .01, 95% CI [-.21, -.03]), and this effect was moderated by religious belief status, such that the effect was only significant for former religious non-believers who now believe (B = -0.12, p = .03, 95% CI [-.22, -.01]).

Likewise, humility moderated the relation between moral struggles and suicide risk (B = -0.06, p = .01, 95% CI [-.10, -.02]), and this effect was only significant for former religious non-believers who now believe (B = -0.06, p = .05, 95% CI [-.13, -.00]). Finally, humility moderated the relation between religious doubt and suicide risk (B = -0.05, p = .01, 95% CI [-.09, -.01]),

and this effect was only significant for former religious non-believers who now believe (B = -0.07, p = .03, 95% CI [-.14, -.01]). Multivariate associations are presented in Table 5.2.

Table 5.2

Multivariate Associations between Spiritual Struggle and Suicide Risk and Moderating Effects of Forgiveness, Gratitude, & Humility

	Forgiveness			Gratitude			Humility		
Overall effect	*β*	*SE*	*p*	*B*	*SE*	*p*	*β*	*SE*	*p*
Spiritual Struggle Total	**0.08**	**0.03**	**<0.01**	**0.11**	**0.02**	**<0.01**	**0.12**	**0.03**	**<0.01**
Divine Struggle	0.28	0.15	0.06	**0.45**	**0.11**	**<0.01**	**0.43**	**0.16**	**0.01**
Demonic Struggle	0.36	0.2	0.07	**0.59**	**0.15**	**<0.01**	**0.59**	**0.22**	**0.01**
Interpersonal Struggle	**0.33**	**0.15**	**0.04**	**0.55**	**0.12**	**<0.01**	**0.46**	**0.16**	**<0.01**
Ultimate Meaning Struggle	0.68	0.15	0.32	**0.78**	**0.16**	**<0.01**	**0.65**	**0.17**	**<0.01**
Moral Struggle	0.35	0.18	0.06	**0.63**	**0.15**	**<0.01**	**0.57**	**0.20**	**0.01**
Doubt Struggle	**0.39**	**0.20**	**0.04**	**0.62**	**0.15**	**<0.01**	**0.64**	**0.21**	**<0.01**
Simple moderation effect									
Spiritual Struggle Total	0.00	0.00	0.18	0.00	0.00	0.79	0.00	0.00	0.21
Divine Struggle	-0.01	0.01	0.37	0.01	0.01	0.15	0.00	0.01	0.52
Demonic Struggle	**-0.04**	**0.02**	**0.04**	0.01	0.01	0.42	0.01	0.01	0.45
Interpersonal Struggle	**-0.03**	**0.01**	**0.04**	0.01	0.01	0.45	-0.01	0.01	0.25
Ultimate Meaning Struggle	-0.02	0.02	0.30	0.01	0.01	0.33	0.01	0.01	0.16
Moral Struggle	-0.02	0.02	0.19	0.00	0.01	0.69	0.00	0.01	0.78
Doubt Struggle	**-0.03**	**0.02**	**0.05**	0.00	0.01	0.93	0.00	0.01	0.93
Moderated moderation effect									
Spiritual Struggle Total	0.01	0.01	0.62	-0.01	0.01	0.17	-0.01	0.01	0.07
Divine Struggle	0.05	0.05	0.33	-0.07	0.05	0.13	-0.04	0.03	0.14
Demonic Struggle	-0.02	0.06	0.76	**-0.10**	**0.04**	**0.02**	-0.06	0.04	0.11
Interpersonal Struggle	0.05	0.05	0.32	-0.06	0.04	0.17	-0.02	0.03	0.39
Ultimate Meaning Struggle	0.00	0.05	0.92	-0.04	0.04	0.27	-0.03	0.03	0.40
Moral Struggle	0.05	0.06	0.38	**-0.12**	**0.05**	**0.03**	**-0.06**	**0.03**	**0.05**
Doubt Struggle	0.04	0.06	0.49	-0.08	0.05	0.13	**-0.07**	**0.03**	**0.03**

Note: Significant associations are bolded.

Discussion

We examined variations in the protective role of forgiveness, gratitude, and humility for the relation between spiritual struggles and suicide risk, based on religious belief status. Forgiveness moderated the association between demonic struggles, interpersonal struggles, and struggles of doubt, and suicide risk. In contrast to our hypotheses, this effect did not differ based on religious belief status. Our gratitude-focused hypotheses were partially supported. The moderating effect of gratitude on the relation between demonic struggles and suicide risk, and between moral struggles and suicide risk, was significantly greater for former religious non-believers who now believe (i.e., converts), than for other belief groups. Finally, similar results were observed for humility, such that the buffering role of humility on the link between moral struggles and suicide risk, and between religious doubt and suicide risk, was greater for former religious non-believers who now believe.

Unexpectedly, the protective role of forgiveness on the association between spiritual struggles and suicide risk did not differ between belief status groups, suggesting that forgiveness provides the same benefits regardless of one's religious background or belief. The consistency of this ameliorative effect across belief status groups confirms previous research indicating the value of forgiveness for wellbeing across diverse samples (e.g., depression, anxiety, substance use; Chung, 2016; Rowell et al., 2019) and suggests that the benefits of forgiveness may occur because of its soothing impact on factors not constrained by the presence or absence of religiousness. For example, forgiveness may help to assuage anger toward God, which can be an outcome of spiritual struggle for both religious believers and non-believers (Exline et al., 2011), and which is associated with suicide risk, among patients with major depressive disorder (Van Vliet et al., 2018). Additionally, forgiveness may promote emotion regulation capabilities (Rey

& Extremera, 2016), and the development of a supportive social network, which may, in turn, protect against psychological distress and suicide, regardless of belief status. For example, in a collegiate study, forgiveness was associated with greater social support and affective balance and, in turn, to improved satisfaction with life (Zhu, 2015). Similarly, in a study of veterans exposed to moral injury, self-forgiveness and social support were associated with reduced suicide risk (Levi-Belz et al., 2020). Thus, although religious belief and involvement may facilitate the development of forgiveness (Escher, 2013), the salubrious effects of forgiveness appear to operate independently of one's identification as religious or non-religious.

In contrast, our findings provide support for the differential impact of gratitude on the link between demonic struggles and suicide risk, and between moral struggles and suicide risk, such that its buffering effect occurred only for former religious non-believers who now believe. For religious converts, the recency and agency of conversion may contribute to greater religious salience, with consequent alteration to cognitive-emotional and behavioral functioning (Kraus, 1999). For example, gratitude is associated with enhanced God-mediated control beliefs (i.e., the belief that God is in control over aspects of one's life; Krause, 2009), whereas the experience of demonic struggles may reflect a demonic-mediated control belief (i.e., belief that demons/spirits have control over aspects of one's life). Thus, gratitude may buffer against the effects of demonic struggles by promoting the belief that God is in control, despite belief in demonic powers that exist.

In the context of moral struggles, which may involve attempts to live up to moral standards or deal with shame from perceived moral transgressions, gratitude may help to regulate moral behavior (e.g., cheating, lying), perhaps due to its ties to self-control (DeSteno et al., 2019). In two recent experimental studies, among young adults in the community (*N* = 141) and

a national online sample (*N* = 156), gratitude was associated with reduced cheating behavior (DeSteno et al., 2019), which the authors posited resulted from a benevolent effort to reduce harm to others. This finding is consistent with previous theoretical conceptualizations of gratitude as a moral affect, and such capacity for socially oriented moral regulation may help to mitigate the effect of moral struggle on suicide risk (McCullough et al., 2001). Gratitude may also promote engagement in healthy coping strategies that reduce suicide risk. For example, in a study of college students (*N* = 319), gratitude was associated with less negative religious coping (e.g., expressing anger at God; Brelsford et al., 2014), whereas, in a meta-analysis of 42 studies, gratitude was associated with positive coping behaviors, include seeking help from religious authorities and engaging in religious practices (e.g., prayer, worship; Lavelock et al., 2016). For religious converts, it may be that conversion to religious belief enhances commitment to one's faith, with resultant increases in religion-focused adherent behaviors (e.g., attempts not to sin) and cognitive-emotional processes, including gratitude toward others and God, may help to counteract moral struggles when they occur, thereby reducing suicide risk (Rosmarin et al., 2011).

Similarly, humility buffered the detrimental effects of moral struggles and religious doubts on suicide risk for former religious non-believers who now believe, compared to other belief status groups. It may be that humility promotes tolerance and acceptance for ones' own moral limitations and may help to mitigate distress from perceived moral shortcomings (Haggard et al., 2018). This may be particularly important for religious converts, as they adapt to a newly adopted moral framework (i.e., religious doctrines and proscriptions) and may be acutely aware of discrepancies in their behavior and the sudden demand to adhere to the moral teaching of their religion (Cottingham, 2013). In the context of religious doubt (e.g., questioning one's belief in

God), humility may protect against suicide through its facilitation of cognitive flexibility, or the ability to revise ideas or shift between patterns of thought, to accommodate religious belief and doubts (Zmigrod et al., 2019). Previous theory suggests that humility requires an abandonment of self-focused, egoistic motives and, to the extent that religious doubts express concerns for the self, humility may buffer their effects by facilitating the restraint of such egoistic motives (Davis et al., 2011). Religious converts may be particularly advantaged by the benefits of gratitude for the linkage between religious doubts and suicide risk, due to the way in which they seek to resolve religious doubts. For instance, religious converts may exhibit increased commitment to their adopted belief system, perhaps engaging in active religious surrender (i.e., seeking help from God to resolve spiritual struggle), rather than passive religious deferral (i.e., excluding God from the resolution of spiritual struggle), which could promote positive spiritual growth and, potentially, reduce suicide risk (Wilt et al., 2019). Such assertions have not been investigated, and future research is needed to better understand how religious belief status, including religious transitions (i.e., conversion, deconversion), may impact the efficacy of protective characteristics to reduce suicide risk in the context of spiritual struggle.

Our novel findings must be considered within the context of several limitations. First, our cross-sectional design limits the ability to draw causal conclusions, and prospective and longitudinal studies are needed to confirm the predictive validity of the association between spiritual struggle and suicide risk and the role of religious maintenance and transitions on the protective efficacy of positive psychological virtues. Additionally, although the distribution of religious backgrounds and beliefs among our sample is representative of the national population, fewer respondents identified as religious converts or life-long religious non-believers, perhaps resulting in limited power to detect small effects. In future studies, utilization of recruitment

strategies (e.g., social media, Qualtrics; Boas et al., 2020; Snook et al., 2021) that ensure inclusion of persons from diverse religious backgrounds, is necessary. Finally, the use of social desirability measures, in future studies, could help to mitigate potential impression management efforts by participants.

Despite limitations, our study offers several implications for theory, research, and practice. First, our findings underscore the importance of religious beliefs and transitions for psychological functioning, including risk for suicide. As such, future theoretical models of suicide should expand to incorporate not only religious and spiritual beliefs, but also religious backgrounds and transitions. Previous theory addresses the importance of religion and spirituality in suicide prevention (e.g., network theory of suicide; Pescosolido & Georgianna, 1989), yet, to our knowledge, no previous theoretical models have been developed to address the role of religious and spiritual transitions in suicide risk. Additionally, future research on the intersection of religiousness and suicide would benefit from a more nuanced approach to the measurement of religion and spirituality. Whereas many studies examine religious belief as a dichotomous construct (i.e., religious vs. non-religious), assessing religious backgrounds and transitions may offer important insights toward suicide prevention. Finally, our results highlight negative aspects of religiousness (i.e., spiritual struggle) as significant predictors of suicide risk, suggesting the need for clinical interventions aimed at addressing spiritually related distress as a means of mitigating suicide risk. To that end, several interventions show promising results for the treatment of religious and spiritual issues in a therapeutic context. For example, in a randomized control trial, Religious Cognitive Behavior Therapy was efficacious in reducing spiritual struggles among patients with major depressive disorder and medical illness (Pearce & Koenig, 2016). Similarly, Winding Road, a 9-week group therapy developed to increase

acceptance of spiritually related distress, promote openness to discussing spiritual struggles, and decrease stigma associated with such struggles, effectively reduced spiritual struggles among psychiatric patients (Reist Gibbel et al., 2019). Positive psychological interventions (e.g., gratitude diary, forgiveness therapy) may also be a useful approach to addressing suicide risk in the context of spiritual and religious struggles (Ducasse et al., 2019). For example, according to a meta-analysis of 15 studies, forgiveness therapy was associated with reduced depression, anger, and hostility (Akhtar & Barlow, 2018).

To conclude, we found that spiritual struggle was associated with suicide risk, and that the positive psychological virtues of forgiveness, gratitude, and humility, moderated this linkage, weakening the deleterious impact of spiritual struggle. Further, we found that the beneficial effects of some positive psychological virtues may differ based on religious transitions and belief status. Finally, although preliminary, our findings offer insights that may contribute to the development of targeted clinical interventions that capitalize on positive psychological functioning in the service of reducing spiritual struggle and suicide risk, for religious believers and non-believers alike.

References

Akhtar, S., & Barlow, J. (2018). Forgiveness therapy for the promotion of mental well-being: A systematic review and meta-analysis. *Trauma, Violence, & Abuse, 19(1),* 107–122. doi:10.1177/1524838016637079

Boas, T. C., Christenson, D. P., & Glick, D. M. (2020). Recruiting large online samples in the United States and India: Facebook, mechanical turk, and qualtrics. *Political Science Research and Methods*, *8*(2), 232-250. doi:10.1017/psrm.2018.28

Boggiss, A. L., Consedine, N. S., Brenton-Peters, J. M., Hofman, P. L., & Serlachius, A. S. (2020). A systematic review of gratitude interventions: Effects on physical health and health behaviors. *Journal of Psychosomatic Research*, *135*(2020), 1 - 10. doi:10.1016/j.jpsychores.2020.110165

Bradley, D. F., Exline, J. J., Uzdavines, A., Stauner, N., & Grubbs, J. B. (2018). The Reasons of Atheists and Agnostics for Nonbelief in God's Existence Scale: Development and initial validation. *Psychology of Religion and Spirituality*, *10*(3), 263–275. doi:10.1037/rel0000199

Brelsford, G. M., Fulmer, M. E., Harrison, M. A., & Xu, X. (2014). Religious coping and gratitude in emerging adulthood. *Research in the Social Scientific Study of Religion*, *25*, 32–52. doi:10.1163/9789004272385_004

Caribé, A. C., Studart, P., Bezerra-Filho, S., Brietzke, E., Noto, M. N., Vianna-Sulzbach, M., Kapczinski, F., Neves, F. S., Correa, H., & Miranda-Scippa, Â. (2015). Is religiosity a protective factor against suicidal behavior in bipolar I outpatients? *Journal of Affective Disorders*, *186*, 156-161. doi:10.1016/j.jad.2015.07.024

Chung, M.S. (2016). Relation between lack of forgiveness and depression. *Psychological*

Reports, *119*(3), 573–585. doi:10.1177/0033294116663520

Cottingham, J. (2013). Conversion, self-discovery, and moral change. In I. Dalferth & M. Rogers (Eds.), *Conversion*, (pp. 311 – 239), Claremont Studies in the Philosophy of Religion. Mohr Siebeck.

Currier, J. M., McDermott, R. C., McCormick, W. H., Churchwell, M. C., & Milkeris, L. (2018). Exploring cross-lagged associations between spiritual struggles and risk for suicidal behavior in a community sample of military veterans. *Journal of Affective Disorders*, *230*, 93–100. doi:10.1016/j.jad.2018.01.009

Currier, J. M., Smith, P. N., & Kuhlman, S. (2017). Assessing the unique role of religious coping in suicidal behavior among U.S. Iraq and Afghanistan veterans. *Psychology of Religion and Spirituality*, *9*(1), 118–123. doi:10.1037/rel0000055

Davis, D. E., Hook, J. N., Worthington, E. L., Van Tongeren, D. R., Gartner, A. L., Ii, D. J. J., & Emmons, R. A. (2011). Relational humility: Conceptualizing and measuring humility as a personality judgment. *Journal of Personality Assessment*, *93*(3), 225–234. doi:10.1080/00223891.2011.558871

Davis, D. E., Worthington, E. L., & Hook, J. N. (2010). Humility: Review of measurement strategies and conceptualization as personality judgment. *The Journal of Positive Psychology, 5(4),* 243–252. doi:10.1080/17439761003791672

DeSteno, D., Duong, F., Lim, D., & Kates, S. (2019). The grateful don't cheat: Gratitude as a fount of virtue. *Psychological Science*, *30*(7), 979–988. doi:10.1177/0956797619848351

Ducasse, D., Dassa, D., Courtet, P., Brand, A. V., Walter, A., Guillaume, S., Jaussent, I., & Olié, E. (2019). Gratitude diary for the management of suicidal inpatients: A randomized controlled trial. *Depression and Anxiety*, *36*(5), 400–411. doi:10.1002/da.22877

Emmons, R. A., & Crumpler, C. A. (2000). Gratitude as a human strength: Appraising the evidence. *Journal of Social and Clinical Psychology*, *19*(1), 56–69.

Escher, D. (2013). How does religion promote forgiveness? Linking beliefs, orientations, and practices. *Journal for the Scientific Study of Religion*, *52*(1), 100–119. doi:10.1111/jssr.12012doi:10.1521/jscp.2000.19.1.56

Exline, J. J., & Martin, A. (2005). Anger toward God: A new frontier in forgiveness research. In E. L. Worthington (Eds.), *Handbook of forgiveness.,* (pp. 73–88). Routledge/Taylor & Francis Group, New York, NY.

Exline, J. J., Pargament, K. I., Grubbs, J. B., & Yali, A. M. (2014). The Religious and Spiritual Struggles Scale: Development and initial validation. *Psychology of Religion and Spirituality*, *6*(3), 208–222. doi:10.1037/a0036465.supp

Exline, J. J., Park, C. L., Smyth, J. M., & Carey, M. P. (2011). Anger toward God: Social-cognitive predictors, prevalence, and links with adjustment to bereavement and cancer. *Journal of Personality and Social Psychology*, *100*(1), 129–148. doi:10.1037/a0021716

Exline, J. J., Van Tongeren, D. R., Bradley, D. F., Wilt, J. A., Stauner, N., Pargament, K. I., & DeWall, C. N. (2020). Pulling away from religion: Religious/spiritual struggles and religious disengagement among college students. *Psychology of Religion and Spirituality*. Advanced online publication. doi:10.1037/rel0000375

Franco, M., & McElroy-Heltzel, S. (2019). Let me choose: Primary caregiver cultural humility, racial identity, and mental health for multiracial people. *Journal of Counseling Psychology*, *66*(3), 269–279. doi:10.1037/cou0000317

George, L. K., Larson, D. B., Koenig, H. G., & McCullough, M. E. (2000). Spirituality and

health: What we know, what we need to know. *Journal of Social and Clinical Psychology*, *19*(1), 102–116. doi:10.1521/jscp.2000.19.1.102

Haggard, M., Rowatt, W. C., Leman, J. C., Meagher, B., Moore, C., Fergus, T., Whitcomb, D., Battaly, H., Baehr, J., & Howard-Snyder, D. (2018). Finding middle ground between intellectual arrogance and intellectual servility: Development and assessment of the limitations-owning intellectual humility scale. *Personality and Individual Differences*, *124*, 184–193. doi:10.1016/j.paid.2017.12.014

Hall, B. B., Webb, J. R., & Hirsch, J. K. (2020). Spirituality and suicidal behavior: The mediating role of self-forgiveness and psychache. *Psychology of Religion and Spirituality, 12*(1), 36 – 44. doi:10.1037/rel0000182

Hansen, M. J., Enright, R. D., Baskin, T. W., & Klatt, J. (2009). A palliative care intervention in forgiveness therapy for elderly terminally ill cancer patients. *Journal of Palliative Care*, *25*(1), 51–60. doi:10.1177/082585970902500106

Hedegaard, H., Curtin S. C., & Warner M. (2020). Increase in suicide mortality in the United States, 1999–2018. *NCHS Data Brief, no 362*. Hyattsville, MD: National Center for Health Statistics.

Hill, P. L., Allemand, M., & Roberts, B. W. (2013). Examining the pathways between gratitude and self-rated physical health across adulthood. *Personality and Individual Differences, 54*(1), 92-96. doi:10.1016/j.paid.2012.08.011

Hirsch, J. K., Webb, J. R., & Jeglic, E. L. (2012). Forgiveness as a moderator of the association between anger expression and suicidal behavior. *Mental Health, Religion & Culture*, *15*(3), 279–300. doi:10.1080/13674676.2011.571666

Hirsch, J. K., Webb, J. R., & Jeglic, E. L. (2011). Forgiveness, depression, and suicidal behavior

among a diverse sample of college students. *Journal of Clinical Psychology*, *67*(9), 896–906. doi:10.1002/jclp.20812

Jankowski, P. J., & Sandage, S. J. (2018). Attachment to God and humility: Indirect effect and conditional effects models. *Journal of Psychology and Theology*, *42*(1), 70–82. doi:10.1177/009164711404200108

Kleiman, E. M., Adams, L. M., Kashdan, T. B., & Riskind, J. H. (2013a). Grateful individuals are not suicidal: Buffering risks associated with hopelessness and depressive symptoms. *Personality and Individual Differences*, *55*(5), 595–599. doi:10.1016/j.paid.2013.05.002

Kleiman, E. M., Adams, L. M., Kashdan, T. B., & Riskind, J. H. (2013b). Gratitude and grit indirectly reduce risk of suicidal ideations by enhancing meaning in life: Evidence for a mediated moderation model. *Journal of Research in Personality*, *47*(5), 539–546. doi:10.1016/j.jrp.2013.04.007

Krause, N. (2009). Religious involvement, gratitude, and change in depressive symptoms over time. *International Journal for the Psychology of Religion*, *19*(3), 155–172. doi:10.1080/10508610902880204

Krause, N. (2014). Exploring the relationships among humility, negative interaction in the church, and depressed affect. *Aging and Mental Health, 18*(8), 970–979. doi:10.1080/13607863.2014.896867

Krause, N., Pargament, K. I., Hill, P. C., & Ironson, G. (2016). Humility, stressful life events, and psychological well-being: Findings from the Landmark Spirituality and Health Survey. *The Journal of Positive Psychology, 11(5),* 499–510. doi:10.1080/17439760.2015.1127991

Kraus, D. (1999). Psychological studies of new religious movements: Findings from German-

speaking countries. *International Journal for the Psychology of Religion*, *9*(4), 263–281. doi:10.1207/s15327582ijpr0904_4

Krumrei-Mancuso, E. J., & Rouse, S. V. (2016). The development and validation of the Comprehensive Intellectual Humility Scale. *Journal of Personality Assessment*, *98*(2), 209–221. doi:10.1080/00223891.2015.1068174

Lavelock, C. R., Griffin, B. J., Worthington, E. L., Benotsch, E. G., Lin, Y., Greer, C. L., Garthe, R. C., Coleman, J. A., Hughes, C. M., Davis, D. E., & Hook, J. N. (2016). A qualitative review and integrative model of gratitude and physical health. *Journal of Psychology and Theology*, *44*(1), 55–86. doi:10.1177/009164711604400105
doi:10.1177/009164711604400105
Levi-Belz, Y., Dichter, N., & Zerach, G. (2020). Moral injury and suicide ideation among Israeli combat veterans: The contribution of self-forgiveness and perceived social support. *Journal of interpersonal violence*, Advanced online publication. doi:10.1177/0886260520920865

Marriott, R. J., Hall, M. E. L., & Decker, L. A. (2019). Psychological correlates of reasons for nonbelief: Tolerance of ambiguity, intellectual humility, and attachment. *Mental Health, Religion & Culture*, *22*(5), 480–499. doi:10.1080/13674676.2019.1625313

McCullough, M. E., Kilpatrick, S. D., Emmons, R. A., & Larson, D. B. (2001). Is gratitude a moral affect? *Psychological Bulletin*, *127*(2), 249–266. doi:10.1037/0033-2909.127.2.249

Pescosolido, B. A., & Georgianna, S. (1989). Durkheim, suicide, and religion: Toward a network theory of suicide. *American Sociological Review*, *54*(1), 33. doi:10.2307/2095660

Quintana-Orts, C., & Rey, L. (2018). Forgiveness, depression, and suicidal behavior in adolescents: Gender differences in this relationship. *The Journal of Genetic Psychology: Research and Theory on Human Development*, *179*(2), 85–89.

doi:10.1080/00221325.2018.1434478

Raines, A. M., Currier, J., McManus, E. S., Walton, J. L., Uddo, M., & Franklin, C. L. (2017). Spiritual struggles and suicide in veterans seeking PTSD treatment. *Psychological Trauma : Theory, Research, Practice and Policy*, *9*(6), 746–749. doi:10.1037/tra0000239

Reist Gibbel, M., Regueiro, V., & Pargament, K. I. (2019). A spiritually integrated intervention for spiritual struggles among adults with mental illness: Results of an initial evaluation. *Spirituality in Clinical Practice*, *6*(4), 240–255. doi:10.1037/scp0000207

Rey, L., & Extremera, N. (2016). Forgiveness and health-related quality of life in older people: Adaptive cognitive emotion regulation strategies as mediators. *Journal of Health Psychology*, *21*(12), 2944–2954. doi:10.1177/1359105315589393

Root Luna, L. M., Van Tongeren, D. R., & Witvliet, C. Van Oyen. (2017). Virtue, positive psychology, and religion: Consideration of an overarching virtue and an underpinning mechanism. *Psychology of Religion and Spirituality*, *9*(3), 299–302. doi:10.1037/rel0000127

Rosmarin, D. H., Pirutinsky, S., Cohen, A. B., Galler, Y., & Krumrei, E. J. (2011). Grateful to God or just plain grateful? A comparison of religious and general gratitude. *The Journal of Positive Psychology, 6(5),* 389–396. doi:10.1080/17439760.2011.596557

Rowell, P. C., Cashwell, C. S., & Zambrowicz, R. (2019). Calm in the storm: The influence of spirituality, dispositional forgiveness, and God concept on anxiety. *Journal of Spirituality in Mental Health*, *22*(3), 240–251. doi:10.1080/19349637.2019.1593916

Schnitker, S. A., & Emmons, R. A. (2017). The psychology of virtue: Integrating positive psychology and the psychology of religion. *Psychology of Religion and Spirituality*, *9*(3), 239–241. doi:10.1037/rel0000133

Sin, N. L., & Lyubomirsky, S. (2009). Enhancing well-being and alleviating depressive symptoms with positive psychology interventions: A practice-friendly meta-analysis. *Journal of Clinical Psychology*, *65*(5), 467–487. doi:10.1002/jclp.20593

Snook, D. W., Branum-Martin, L., & Horgan, J. G. (2021). Zeal of the convert? Comparing religiousness between convert and nonconvert Muslims. *Psychology of Religion and Spirituality*. Advance online publication. doi:10.1037/rel0000421

Stack, S. (1983). The effect of religious commitment on suicide: A cross-national analysis. *Journal of Health and Social Behavior*, *24*(4), 362–374. doi:10.2307/2136402

Sutherland, C. (1990). Changes in religious beliefs, attitudes, and practices following near-death experiences: An Australian study. *Journal of Near-Death Studies, 9(1),* 21–31. doi:10.1007/BF01074098

Thompson, L. Y., Snyder, C. R., Hoffman, L., Michael, S. T., Rasmussen, H. N., Billings, L., Heinze, L., Nuefeld, J. E., Shorey, H. S., Roberts, J. C., & Roberts, D. E. (2005). Dispositional forgiveness of self, others, and situations. *Journal of Personality*, *73*(2), 313–360. doi:10.1111/j.1467-6494.2005.00311.x

Van Vliet, N. K., Schaap-Jonker, H., Jongkind, M., van der Velde, N., van den Brink, A., & Braam, A. W. (2018). The associations between God representations and suicidality among Christian patients with a major depressive disorder. *Tijdschrift Voor Psychiatrie*, *60*(8), 511–520.

Voas, D., & Chaves, M. (2016). Is the United States a counterexample to the secularization thesis? *American Journal of Sociology*, 121(5), 1517–1556. doi:10.1086/684202

Webb, J. R., Hirsch, J. K., & Toussaint, L. (2015). Forgiveness as a positive psychotherapy for addiction and suicide: Theory, research, and practice. *Spirituality in Clinical Practice*, *2*(1),

48–60. doi:10.1037/scp0000054

Wilt, J. A., Stauner, N., Harriott, V. A., Exline, J. J., & Pargament, K. I. (2019). Partnering with God: Religious coping and perceptions of divine intervention predict spiritual transformation in response to religious−spiritual struggle. *Psychology of Religion and Spirituality*, *11*(3), 278–290. doi:10.1037/rel0000221.supp

Wilt, J. A., Takahashi, J. T., Yun, D., Jeong, P., Exline, J. J., & Pargament, K. I. (2021). A mixed-methods study of communing with and complaining to the divine: Imagined conversations with God among undergraduates reporting religious and spiritual struggles. *Psychology of Religion and Spirituality*, Advanced online publication. doi:10.1037/rel0000405

Worthington, E. L., Davis, D. E., & Hook, J. N. (2017). *Handbook of humility: Theory, research, and applications*. Routledge/Taylor & Francis Group. doi:10.4324/9781315660462

Zhu, H. (2015). Social support and affect balance mediate the association between forgiveness and life satisfaction. *Social Indicators Research*, *124*(2), 671–681. doi:10.1007/s11205-014-0790-8

Zmigrod, L., Zmigrod, S., Rentfrow, P. J., & Robbins, T. W. (2019). The psychological roots of intellectual humility: The role of intelligence and cognitive flexibility. *Personality and Individual Differences*, *141*, 200–208. doi:10.1016/j.paid.2019.01.016

Chapter 6. Integrated Discussion

A growing consensus among scholars of the psychology of religion and spirituality is that positive psychological virtues serve a primary function in the beneficial outcomes of religiousness (Root Luna et al., 2017). Forgiveness, gratitude, and humility are commonly studied positive psychological characteristics with empirically supported linkages to religiousness and both physical and mental wellbeing (Aghababaei, 2014; Lutjen et al., 2012; Robustelli & Whisman, 2016; Schnitker & Emmons, 2017). Yet, for some, religion may facilitate negative emotional experiences in the form of social exclusion, religious doubting, demonic attributions, or crises of existential meaning, experiences collectively termed spiritual struggle that are often associated with poor health outcomes, including suicide (Currier et al., 2018; Exline et al., 2014). Indeed, the extant literature documents both risk and protective factors for suicide within the context of religion (Kopacz et al., 2016; Raines et al., 2017). However, Americans are undergoing changes in religious identity at an unprecedented rate (Voas & Chaves, 2016), providing a novel context for the study of religion and suicide and warranting examination of the impact of religious transition on suicide risk. In a series of studies, we examined three primary differences among life-long religious non-believers, life-long religious believers, former religious believers who no longer believe, and former religious non-believers who now believe, including: 1) differences in mean levels of forgiveness, gratitude, humility, and spiritual struggle, 2) differences in the prediction of suicide by forgiveness, gratitude, humility, and spiritual struggle, and 3) differences in the moderating role of forgiveness, gratitude, and humility on the relation between spiritual struggle and suicide risk.

In our first study, we found that forgiveness significantly differed across groups, such that former religious non-believers who now believe exhibited greater levels of forgiveness than

all other groups. We also found that life-long religious believers and former religious non-believers who now believe reported greater levels of gratitude than life-long religious non-believers and former religious believers who no longer believe. Finally, life-long religious believers reported fewer interpersonal spiritual struggles than former religious-believers who no longer believe, and former religious non-believers who now believe reported fewer struggles of ultimate meaning than former religious believers who no longer believe.

In our second study, we found that forgiveness and gratitude were inversely associated with suicide risk, and this effect did not differ based on religious belief status. In contrast, the effect of gratitude on suicide risk was significantly greater for former religious non-believers who now believe, compared to all other groups. Finally, we found that spiritual struggle, including all subscales, was related to suicide risk and this association did not differ by religious belief status.

In our third study, we examined the moderating role of forgiveness, gratitude, and humility on the relation between spiritual struggle and suicide risk. Forgiveness was protective against the relation between demonic struggles, interpersonal struggles, and struggles of doubt, and suicide risk for all belief groups. We also found that a beneficial effect of gratitude on the relation between demonic struggles and suicide risk, and between moral struggles and suicide risk, occurred only for former religious non-believers who now believe, compared to all other groups. Similarly, the effect of humility on the relation between moral struggles and suicide risk, and between religious doubt and suicide risk was significant only for former religious non-believers who now believe. In the sections that follow, we discuss these findings in the context of the extant theoretical and empirical literature and provide practical implications and future directions for theory and research.

Positive Psychological Virtues, Religiousness, and Suicide Risk

Although previous research has documented the linkage between positive psychological characteristics and religiousness, our studies are the first to examine these associations across belief status groups. Our findings confirm previous research linking religiousness to positive psychological functioning, while highlighting some important nuances in this association, including differences in course of development for these protective characteristics. For example, previous theoretical models have suggested that one's disposition to forgive may develop through a process of socialization resulting from a religious upbringing (Escher, 2013). However, our findings suggest that transitioning to religious belief from non-belief was associated with greater forgiveness, compared to all other belief statuses. Thus, socialization into a religious belief system following religious conversion, rather than socialization from a religious upbringing, may have a greater impact on the development and practice of forgiveness.

Gratitude, however, was associated with both life-long religious beliefs and transition to religious belief from non-belief. Differences in the development and expression of forgiveness and gratitude based on one's religious background and belief may be due to the way in which these characteristics manifest in religious teachings and practices. For example, although forgiveness of others is valued by most religious traditions, religious practices may place a greater emphasis on seeking forgiveness (e.g., praying for forgiveness of sins, practicing confession), rather than extending forgiveness to others. In contrast, gratitude may be more heavily emphasized in regular religious practices and verbiage (e.g., prayers of gratitude, "counting blessings"; Wirtz et al., 2014). As such, for life-long religious believers, religious values that are more heavily emphasized in religious practices (i.e., gratitude compared to forgiveness), across a lifetime, may be maintained to a greater degree than religious values less

emphasized by religious practices. On the other hand, for former religious non-believers who now believe, conversion to religious belief may promote a greater degree of commitment to the practice of religious values, regardless of their manifestation in religious practices or rituals. That is, former religious non-believers who now believe may experience a “recency effect” that promotes adherence to religious values that are not explicitly incorporated into religious practices. Indeed, others have noted the tendency of religious conversion to prompt a zealous adherence to the newly adopted religious belief system (Roald, 2012).

Surprisingly, we found no significant differences in levels of humility across belief status groups. Despite previous literature linking humility to religiousness, trait theory also suggests that humility may have evolved to enhance social cooperation and cohesion (Gregg & Mahadevan, 2014). As Tangney (2000) notes, “Boastful, arrogant behavior does not appeal to most, often resulting in social disapproval. Thus, from an evolutionary perspective, humility may develop naturally, and in response to positive reinforcement of humble behavior in social interactions, ocurring outside of the context of religious development or influence. Some researchers have also suggested that humility has a paradoxical role in religious systems, such that religious adherents are encouraged to practice humility while holding and expressing religious beliefs with complete certainty, contributing to methodological issues limiting the accurate measurement of humility (Hook & Davis, 2014).

Our findings also contribute to the literature on the protective role of forgiveness, gratitude, and humility for suicide risk. Consistent with previous research, each of these positive psychological characteristics were independently and inversely associated with suicide risk. The association between forgiveness and suicide, however, did not differ across religious belief status groups. In a theoretical model of the relation between spirituality, forgiveness and suicide, Webb

et al. (2013) suggest that forgiveness, as a component of spirituality, may be directly, and indirectly, associated with suicide risk via its beneficial association with psychological distress (e.g., depression, anxiety, existential angst, psychache). Such psychological distress is widely considered a common aspect of human existence (Hayes & Lillis, 2014) and, thus, neither religious believers nor nonbelievers are immune to such suffering. On the other hand, that forgiveness exerts a protective effect on an array of psychosocial variables, and without regard to religious belief status, suggests that it has broad applicability as a potential therapeutic target. For instance, forgiveness was directly related to less suicide risk, among college students (Hirsch et al., 2011), and was indirectly associated with suicide risk via its beneficial impact on depression and interpersonal functioning, in primary care patients (Nsamenang et al., 2013). Similarly, in a study of middle-aged female nurses, greater forgiveness was associated with increased social integration (Long et al., 2020) and, in a collegiate study, humility was related to the development of strong interpersonal relationships (Davis et al., 2013). As indicated in previous research, such social support buffers against suicide risk resulting from the effects of adverse childhood experiences, job stress, crime victimization, and depressive symptoms (Forster et al., 2020; Nie et al., 2020; Zapata Roblyer & Betancourth Zambrano, 2020). Thus, the association of forgiveness to suicide risk may be predicated not only on mitigation of risk factors, but also on the promotion of potential protective factors.

Like forgiveness, the association between humility and suicide risk did not differ based on religious belief status, suggesting that the development, manifestation and efficacy of humility is not predicated on the presence or absence of religious belief. It has been posited that humility is a “master virtue” that serves as the foundation of other psychological virtues (Lavelock et al., 2017). Indeed, previous research links humility to a number of other positive

psychological variables including gratitude (Kruse et al., 2014), forgiveness (Bell & Fincham, 2019), and patience (Lavelock et al., 2017). As such, the beneficial influence of humility on suicide risk may be due to its facilitation of adaptive psychsocial functioning. For example, in a study of young adult females (N = 152), humility was related to greater self-forgiveness, forgiveness of others, and relationship satisfaction (Bell & Fincham, 2019). Similarly, in a U.S. community sample, humility was associated with greater forgiveness and, in turn, to greater meaning in life and better self-rated health. Humility may also mitigate suicide risk due to its influence on cognitive processes. For instance, in a study by Zmigrod and colleages (2019), humility was associated with cognitive flexibility, a characteristic that may allow humble persons to challenge negative, unhelpful thought patterns that precipitate suicidal ideation or behavior (Law & Tucker, 2018).

In contrast, the association between gratitude and suicide risk differed across belief status groups, such that gratitude was more robustly related to suicide risk for former religious non-believers who now believe, than for members of the other belief groups. This finding suggests that gratitude has a distinct interaction with religious belief in the context of predicting suicide risk, unlike forgiveness or humility. Gratitude's association with suicide risk may be dependent, in part, upon one's explanation for grateful emotions. For example, religious converts may be more likely to attribute grateful emotions to God, or a deity, compared to those from other belief status groups. Drawing on the work of identity theory (Stryker, 1980), Carothers (2010) theorized that religious converts demonstrate a higher degree of religious salience than non-converts. Defined as "the importance one attaches to being religious" (Roof & Perkins, 1975, p. 111), religious salience may promote expression of gratitude toward God due to the newness of ones' recently adopted religious belief and a striving to live in accordance with one's newfound

religious identity. In contrast, being raised with a religious identity may result in a decline of religious salience, and a subsequent ambivalence toward religiousness, throughout the life span (Chan et al., 2015). These assertions, however, have yet to be explored in the academic literature and additional research is needed to develop a comprehensive framework for explaining how the association between positive psychological functioning and suicide risk may differ due to religious transitions and belief status. Additionally, it is important to acknowledge that not all religious transitions and experiences are beneficial and that, for some individuals, religious engagement may have negative connotations and consequences, which we discuss in the next section.

Spiritual Struggle, Positive Psychological Virtues, Religiousness, and Suicide Risk

Although most literature on religiousness and suicide has documented the protective role of religiousness, spiritual struggle may exacerbate suicide risk for both religious and non-religious persons (Raines et al., 2020). In our study, each facet of spiritual struggle (i.e., divine, demonic, interpersonal, doubt, moral, ultimate meaning) was associated with suicide risk, for members of all belief status groups. Moreover, certain belief groups may be more susceptible to spiritual struggle and, consequently, more vulnerable to suicide risk. To begin, life-long religious believers reported fewer interpersonal struggles than former religious believers who no longer believe. As previously noted, many theories of religiousness emphasize social support as a core mechanism of the benefits of being religious (e.g., Network Theory; Pescosolido & Georgianna, 1989). Thus, lifelong religious beliefs may facilitate the maintenance of social networks and support. In contrast, deconverts (i.e., former religious believers who no longer believe) may be subject to criticism and exclusion from previous social networks based on their status as a non-believer. In a qualitative analysis of individuals identifying as atheist ($N = 80$), Zimmerman et al.

(2015) found that familial rejection and conflict were common experiences for atheists when disclosing their religious transition to family. As such, deconverts may be more vulnerable to interpersonal struggles, compared to other belief groups.

We also found that religious converts (i.e., former religious non-believers who now believe) had fewer struggles of ultimate meaning compared to deconverts (i.e., former religious believers who no longer believe). Indeed, religious converts are likely to experience an increase in meaning in life (Halama & Lacna, 2011), whereas deconverts may experience a loss of meaning (Streib & Keller, 2003). As Steger and colleagues (2010) note, "religion may provide people with answers about who they are, how the world works, and what life is really all about" (p. 207). It is not surprising that religion may enhance perceptions of ultimate meaning, as purposefulness and meaningfulness are central components to most religions (Park, 2013). Indeed, in previous research, religious conversion is often prompted by a search for meaning (Snook et al., 2019), and many religious converts report an increase in life meaning following conversion (Halama & Lačná, 2011).

Regarding spiritual distress, we found that each of the forms of spiritual struggle we assessed was associated with suicide risk, regardless of religious belief status. This finding is consistent with previous research documenting the linkage between spiritual struggle and suicide (Raines et al., 2020). The globality of this finding across belief status groups confirms that both religious believers and non-believers can be deleteriously impacted by spiritual struggles, although there may be differences in the way in which believers and non-believers experience spiritual struggle. For example, previous research suggests that religious deconverts (i.e., former religious believers who no longer believe) experience a "religious residue," or a continuation of religious beliefs or behaviors, despite identifying as a non-believer, which may result in spiritual

struggles related to a previous religious identity (Van Tongeren et al., 2021). For life-long religious non-believers, spiritual struggle may result from hypothetical perceptions of God (e.g., view of God as punishing or cruel), a perspective that may serve as an intellectual reason for non-belief (Bradley et al., 2017). In contrast, for religious believers (i.e., life-long and religious converts), spiritual struggle may indicate a perceived rupture in one's relationship with God, resulting in distress. Pargament et al. (1998) note that negative religious coping, a construct closely associated with spiritual struggle, is characterized by a "less secure relationship with God" (p. 712), and such insecurity in one's divine relationship is related to suicide risk, for example, among patients with advanced cancer (Trevino et al., 2014). Of note, the construct of spiritual struggle encompasses potential difficulties that are not limited by one's beliefs about God, such as feelings of abandonment or moral dilemmas (Exline et al., 2014). Thus, belief in God/deity is not a prerequisite for spiritual struggles, and the association of spiritual struggle to suicide risk appears consistent regardless of religious background or beliefs.

We also examined the potential mitigating role of forgiveness, gratitude, and humility on the relation between spiritual struggle and suicide risk, and whether this effect was moderated by religious belief status. In contrast to our hypotheses, the impact of forgiveness on the linkage between spiritual struggle and suicide risk did not differ based on religious belief status. As previously noted, forgiveness may indirectly impact suicide risk through its association with both risk and protective factors for suicide. For example, the extant literature highlights the association of forgiveness to a wide range of psychopathological risk factors for suicide including depression, anxiety, anger, perceived burdensomeness, and global mental health (Berry & Worthington, 2001; Webb & Toussaint, 2020). Such associations may be important in the context of spiritual struggle and suicide, as previous research suggests that these psychological

factors may mediate the link between spiritual struggle and suicide risk. For instance, in a study of U.S. veterans seeking mental health treatment ($N = 110$), spiritual struggle was indirectly related to suicide risk through the mediating role of perceived burdensomeness (Raines et al., 2020). Forgiveness may also impact the linkage between spiritual struggle and suicide risk, via its association with potential protective factors. For example, forgiveness may facilitate the development of social support (Long et al., 2020; Forster et al., 2020), which could help to mitigate the deleterious effect of spiritual struggle regardless of religious belief status. Yet, research on the association between forgiveness, spiritual struggle, and suicide risk is limited, and additional study is needed to clarify these associations.

In contrast, we found that the mitigating impact of gratitude and humility on the relation between spiritual struggle and suicide risk differed based on belief status. Specifically, gratitude buffered the association between demonic struggles and suicide risk, and between moral struggles and suicide risk, more robustly for former religious non-believers who now believe, compared to members of other belief groups. As we noted in Study Three, demonic struggles may represent a belief that demonic forces exert some level of control over one's life. However, gratitude may mitigate the negative effects of demonic struggles through the promotion of God-mediated control beliefs, or the belief that God exerts control over one's life (Krause, 2009).

Although God-mediated control beliefs have not been previously studied in the context of suicide risk, such beliefs may enhance one's sense of hope for the future (Krause & Hayward, 2012), thereby reducing suicide risk. In the context of moral struggles, it may be that gratitude promotes a tolerance for one's moral shortcomings (Haggard et al., 2019), and thankful acknowledgement of God's forgiveness for one's moral violations (Abernethy et al., 2016). Such

acknowledgement may reduce psychological distress associated with moral struggles, including suicide risk, although further research is needed to support this assertion.

Humility buffered the relation between moral struggles and suicide risk, and between doubt struggles and suicide risk, and this effect occurred only former religious non-believers who now believe. As previous conceptualizations posit, humility requires an acknowledgement of one's own limitations (Barrett, 2017), and such limitations may include the failure to live up to one's moral standards. Thus, humility may alleviate distress that is associated with such moral shortcomings. Similarly, in the context of religious doubt, humility may be expressed as an acknowledgement of one's own limitations in reasoning. That is, when doubts about the existence of God arise, humility may prompt an individual to pursue alternative sources of information or guidance, rather than relying on their own reasoning. As Hill et al. (2018) note, for religious believers, humility may be expressed through an intellectual dependence on God, such that one's own intellectual reasoning is viewed as inferior to divine sources of knowledge (e.g., religious texts). However, as research on humility is still in its early stages, additional research is needed to better understand how humility may influence suicide risk, particularly in the context of struggles of religious doubt and moral strivings.

That the impact of gratitude and humility differs based on belief status, compared to forgiveness, may be due to the way in which these virtues manifest in a divine relationship. That is, gratitude and humility may be characteristics that describe one's relationship to God/deity (e.g., gratefulness to God, humbled by God), whereas interpersonal forgiveness is a prescriptive value of one's religious system that is applied to interpersonal relationships outside of one's relation to God/deity. Thus, gratitude and humility may have a more personal meaning to one's relationship with God/deity. That is not to say that other dimensions of forgiveness (e.g.,

forgiveness of God, seeking forgiveness from God, self-forgiveness) are not an important aspect of religious and spiritual functioning or one's personal relationship with God. Previous research suggests that, indeed, such aspects of forgiveness are related to psychological well-being (Fincham & May, 2019). Moreover, conversion to religious belief may heighten one's perception of their relationship with God (Johnson & Armour, 2018), thereby increasing gratitude and humility, potentially due to a self-perception of being the beneficiary of God's benevolence (e.g., forgiveness for sins, meaning in life, positive life events; Hall & McMinn, 2021). Such effects of conversion may, in turn, enhance the mitigating effect of gratitude and humility on the relation between spiritual struggle and suicide risk.

In sum, our findings confirm previous research linking spiritual struggle to suicide risk and, further, we expand the extant literature by highlighting that this effect occurs regardless of one's religious belief status. Additionally, we found that forgiveness, gratitude, and humility exert a protective effect, buffering against suicide risk in the context of spiritually related distress. Specifically, for religious converts, gratitude appears to operate most prominently in the context of demonic struggles and moral struggles, and humility most prominently for moral struggles and struggles of doubt, toward the reduction of suicide risk, for former religious non-believers who now believe. To our knowledge, our study is the first to examine religiously oriented suicide risk and protective factors across individuals with differing religious beliefs. Although additional research is needed, our findings offer new insights into the complex associations between religiousness, positive psychological virtues, and suicide risk.

Limitations

Although our project offers novel contributions to the scientific study of religion and the field of suicidology, our findings must be considered within the context of minor limitations.

First, our cross-sectional design precludes the ability to draw causal conclusions from our analyses. Prospective and longitudinal studies are needed to confirm the predictive linkage between religiously oriented risk and protective factors and suicidal outcomes. Next, given our use of self-report measures, the potential for social desirability bias exists, particularly because positive psychological constructs are likely to be viewed by most participants as favorable qualities to possess, perhaps resulting in over-endorsement for the purpose of positive impression management. Likewise, participants may be less likely to disclose spiritual struggle or suicide risk due to the stigma associated with these constructs (Exline & Rose, 2013; Vannoy et al., 2017). As such, future research should include measures (e.g., BIDR; Asgeirsdottir et al., 2016) to reduce the potential impact of social desirability. Finally, despite declining rates of religiousness in the U.S. (Voas & Chaves, 2016), a large proportion of the population still endorses religion, although there are fewer recent religious converts (Pew Research Center, 2019), trends which resulted in our national sample having fewer members of these belief groups, compared to life-long religious believers and deconverts, and which may have limited statistical power to detect small effects. Future studies should consider sampling methodologies, such as oversampling members of under-represented religious groups.

Implications

Despite limitations, our series of studies offers several potential implications for the assessment, prevention, and intervention of suicide. First, our finding that spiritual struggle predicts suicide risk regardless of one's religious beliefs calls for expanding the scientific study of religion and spirituality to incorporate the experiences of non-believers. Various theoretical models have proposed a broader conceptualization of spirituality, not limited to those who hold theistic beliefs (e.g., Worthington & Aten, 2009). For example, Webb et al. (2014) developed a

model of spirituality comprised of three facets, including ritualistic spirituality (e.g., religious behaviors, church attendance, prayer), theistic spirituality (e.g., beliefs in a God/deity), and existential spirituality (e.g., connection to nature, non-theistic aspects of spirituality). Previous empirical evidence suggests that non-theistic aspects of spirituality (e.g., existential spirituality) can be protective against suicide risk (Hall et al., 2020). Thus, the assessment of religious and spiritual orientation, including the absence of religious belief or practice, should be considered relevant in a therapeutic context. Moreover, the consideration of one's transitions to or from religious beliefs may be an important area of assessment, as these transitions may highlight potential risk or protective factors for suicide. For example, an individual seeking mental health services following a deconversion from religious belief may be vulnerable to interpersonal spiritual struggles related to this transition (Fischer, 2017). Additionally, although our findings provide some support for the connection between religiousness and positive psychological virtues, more research is needed to further clarify this association, including potential mechanisms of action. Some scholars have theorized (i.e., unity of the virtues thesis) that these virtues share an overarching construct such as "practical wisdom" or "general virtuousness," and common underlying mechanisms such as self-regulation, yet more research is needed to support these theories (Root Luna et al., 2017).

Our findings also highlight the need for interventions aimed at spiritually related distress among both religious believers and non-believers. Previous research among graduate students seeking counseling suggests that as many as one-third of participants expressed distress related to spiritual or religious beliefs (Johnson & Hayes, 2003). Although research on spiritually integrated interventions has only recently emerged in the literature, several approaches have shown promising results for the treatment of spiritual struggles. For example, Religious

Cognitive Behavioral Therapy is effective at reducing spiritually related distress among patients with depression and medical illness (Pearce et al., 2016). This finding was confirmed in a randomized clinical trial, though traditional cognitive behavioral therapy was equally effective at reducing spiritual struggles (Pearce & Koenig, 2016). Similarly, Winding Road, a 9-session group intervention aimed at reducing spiritual struggle by promoting acceptance of spiritual struggle and openness to discussing religious distress, was efficacious in reducing divine struggles and increasing forgiveness among psychiatric patients (Reist Gibbel et al., 2019).

Mainstream interventions have also been adapted to integrate spiritually-related distress, such as Acceptance and Commitment Therapy (ACT; Santiago & Gall, 2016), which is a values-based therapy. As Santiago and Gall (2016) note, ACT is particularly well poised to address issues pertaining to religiosity and spirituality, as religion is also a value-based system. Acceptance and Commitment Therapy may also be an effective treatment for spiritually related distress, given its emphasis on existential aspects of mental health; indeed, in previous research, existential psychotherapies have proven efficacious for addressing psychopathology accompanied by existential and religious concerns (Stålsett et al., 2012). Importantly, mainstream interventions may be more appropriate for non-religious persons and offer similar benefits to religiously integrated treatments in addressing spiritually related distress (Pearce et al., 2016).

Our findings also offer support for the utilization of positive psychological approaches to manage suicidality in psychotherapy. Although positive psychological virtues are often a focus of treatment for alcohol and drug disorders, such as Alcoholics Anonymous (Post et al., 2016), they have been less frequently integrated into suicide prevention strategies. Of note, although religiousness may promote the development and expression of positive psychological traits such

as forgiveness, gratitude, and humility, these virtues are not exclusive to religious persons and can be cultivated outside of the context of religion or spirituality. Various interventions to foster the development of positive psychological characteristics have been developed and preliminary evidence supports their efficacy. For example, in a longitudinal study of Pakistani female adolescent victims of childhood abuse, participants assigned to forgiveness therapy, compared to treatment as usual, displayed greater levels of forgiveness at a one-year follow up (Rahman et al., 2018). Similarly, forgiveness therapy increased forgiveness in a study of adult children of alcoholics (Osterndorf et al., 2011). Although forgiveness therapy has not been empirically investigated as an intervention for suicide risk, it has been associated with numerous psychosocial outcomes linked to suicide. In the largest meta-analysis of forgiveness therapy to date, Akhtar and Barlow (2018) found that forgiveness therapy reduced depression, anger, hostility, and stress across fifteen randomized clinical trials.

Clinical interventions are also effective in cultivating gratitude, with accompanying beneficial impact on mental health, including reduced anxiety, and enhanced optimism and life satisfaction (Kerr et al., 2015). For example, among a clinical sample of adults seeking psychotherapy, a two-week intervention utilizing a daily gratitude log resulted in increased gratitude (Kerr et al., 2015). Similarly, in a study of college students (N = 260), a group-based gratitude intervention increased levels of gratitude and was associated with greater satisfaction and meaning in life and decreased psychological distress (Wong et al., 2017). Increased gratitude may also result from both mainstream psychological interventions and religiously oriented psychotherapies that were not specifically designed to promote gratitude. For example, both conventional Cognitive Behavioral Therapy and Religiously Integrated Cognitive Behavioral Therapy were effective at increasing gratitude among patients with major depression and chronic

medical illness (Pearce et al., 2016). Further research is needed to examine the effects of gratitude-based interventions on suicide risk, as this has yet to be empirically investigated.

Finally, interventions developed to promote humility, although less studied, have also yielded promising results. In a study of religious leaders in the U.S. (N = 136), participants engaged in a four-hour group-based humility intervention followed by a month of adhering to a personal humility practice plan, resulting in increased humility at one-month follow-up (Jankowski et al., 2021). Similarly, Lavelock and colleagues (2014) developed a workbook designed to promote humility (i.e., PROVE workbook) and, in a study of college students, found that this intervention increased levels of humility, promoted other psychological virtues (e.g., forgiveness, patience), and decreased trait negativity among college students (Lavelock et al., 2017). Increased humility has also been shown to result from religiously oriented meditation interventions among Christian college students (Knabb et al., 2020). Of note, most research on humility-based interventions has occurred among religious believers, leaving gaps in the literature regarding the effects of such interventions on religious non-believers. Future research should consider the impact of religious beliefs and transitions on the efficacy and effectiveness of humility-based interventions.

Conclusions

To conclude, suicide is a significant public health concern and systems of religious belief may contribute to, or mitigate, suicide risk. More specifically, religious involvement may lead to distressing emotional and psychological experiences, termed spiritual struggle, that contribute to risk for suicide. On the other hand, religious belief may promote the development of positive psychological virtues such as forgiveness, gratitude, and humility, which may serve as protective factors for suicide. In addition to providing support for the associations among forgiveness,

gratitude, humility, spiritual struggle, and suicide risk, our project is among the first to examine these linkages in the context of varying religious belief statuses (i.e., life-long religious believers and non-believers, former religious believers who no longer believe, former religious non-believers who now believe). A central theme of our findings is that the linkage between religiously oriented risk and protective factors and suicide is not necessarily consistent across religious backgrounds and beliefs. As such, future research should focus on the impact of religious transitions (i.e., compared to life-long religious belief or non-belief) on the development and expression of spiritual struggle, forgiveness, gratitude, and humility in the context of suicide risk. Moreover, our research highlights the need for the development and study of interventions aimed at addressing spiritually related distress and promoting positive psychological functioning with a particular sensitivity to one's religious background and belief. Religion and spirituality continue to be a significant force in the lives of many, and ongoing research to capitalize on the unique strengths of religiousness, while mitigating potential struggles, is a noble goal for the psychological science of religion and spirituality.

References

Abernethy, A. D., Van Oyen-Witvliet, C., Kurian, K. R., Brown, S., Uh, M., Rice, B., & Rold, L. (2016). Varieties of spiritual experience: A study of closeness to God, struggle, transformation, and confession-forgiveness in communal worship. *Journal of Psychology and Christianity*, *35*(1), 9–21.

Abu-Raiya, H., Pargament, K. I., & Krause, N. (2016). Religion as problem, religion as solution: Religious buffers of the links between religious/spiritual struggles and well-being/mental health. *Quality of Life Research*, *25*(5), 1265–1274. doi:10.1007/s11136-015-1163-8

Abu-Raiya, H., Pargament, K. I., Krause, N., & Ironson, G. (2015). Robust links between religious/spiritual struggles, psychological distress, and well-being in a national sample of American adults. *The American Journal of Orthopsychiatry*, *85*(6), 565–575. doi:10.1037/ort0000084

Abu-Raiya, H., Sasson, T., Palachy, S., Mozes, E., & Tourgeman, A. (2017). The relationships between religious coping and mental and physical health among female survivors of intimate partner violence in Israel. *Psychology of Religion and Spirituality*, *9*(1), S70–S78. doi:10.1037/rel0000107

Aghababaei, N. (2014). God, the good life, and HEXACO: The relations among religion, subjective well-being and personality. *Mental Health, Religion & Culture*, *17*(3), 284–290. doi:10.1080/13674676.2013.797956

Aghababaei, N., Błachnio, A., Arji, A., Chiniforoushan, M., Tekke, M., & Fazeli Mehrabadi, A. (2016). Honesty–humility and the HEXACO structure of religiosity and well-being. *Current Psychology*, *35*(3), 421–426. doi:10.1007/s12144-015-9310-5

Aghababaei, N., Wasserman, J. A., & Nannini, D. (2014). The religious person revisited: Cross-

cultural evidence from the HEXACO model of personality structure. *Mental Health, Religion & Culture*, *17*(1), 24–29. doi:10.1080/13674676.2012.737771

Agren, H., & Niklasson, F. (1986). Suicidal potential in depression: Focus on CSF monoamine and purine metabolites. *Psychopharmacology Bulletin*, *22*(3), 656–660. Retrieved from http://www.ncbi.nlm.nih.gov/pubmed/2879306

Ahles, J. J., Mezulis, A. H., & Hudson, M. R. (2016). Religious coping as a moderator of the relationship between stress and depressive symptoms. *Psychology of Religion and Spirituality*, *8*(3), 228–234. doi:10.1037/rel0000039

Akhtar, S., & Barlow, J. (2018). Forgiveness therapy for the promotion of mental well-being: A systematic review and meta-analysis. *Trauma, Violence, & Abuse*, *19*(1), 107–122. doi:10.1177/1524838016637079

Aloba, O., Ojeleye, O., & Aloba, T. (2017). The psychometric characteristics of the 4-item Suicidal Behaviors Questionnaire-Revised (SBQ-R) as a screening tool in a non-clinical sample of Nigerian university students. *Asian Journal of Psychiatry*, *26*, 46–51. doi:10.1016/j.ajp.2017.01.017

Ano, G. G., & Vasconcelles, E. B. (2005). Religious coping and psychological adjustment to stress: A meta-analysis. *Journal of Clinical Psychology*, *61*(4), 461–480. doi:10.1002/jclp.20049

Asgeirsdottir, R. L., Vésteinsdóttir, V., & Thorsdottir, F. (2016). Short form development of the Balanced Inventory of Desirable Responding: Applying confirmatory factor analysis, item response theory, and cognitive interviews to scale reduction. *Personality and Individual Differences*, *96*, 212–221. doi:10.1016/j.paid.2016.02.083

Bah, J., Lindström, M., Westberg, L., Mannerås, L., Ryding, E., Henningsson, S., Melke, J.,

Rosén, I., Träskman-Bendz, L., & Eriksson, E. (2008). Serotonin transporter gene polymorphisms: Effect on serotonin transporter availability in the brain of suicide attempters. *Psychiatry Research - Neuroimaging*, *162*(3), 221–229. doi:10.1016/j.pscychresns.2007.07.004

Barrett, J. L. (2017). Intellectual humility. *Journal of Positive Psychology*, *12*(1), 1–2. doi:10.1080/17439760.2016.1167945

Bell, C. A., & Fincham, F. D. (2019). Humility, forgiveness, and emerging adult female romantic relationships. *Journal of Marital and Family Therapy*, *45*(1), 149–160. doi:10.1111/jmft.12292

Berlim, M. T., Mattevi, B. S., Pavanello, D. P., Caldieraro, M. A., Fleck, M. P. A., Wingate, L. R., & Joiner, T. E. (2003). Psychache and suicidality in adult mood disordered outpatients in Brazil. *Suicide & Life-Threatening Behavior*, *33*(3), 242–248. Retrieved from http://www.ncbi.nlm.nih.gov/pubmed/14582835

Berry, J. W., & Worthington, E. L. (2001). Forgivingness, relationship quality, stress while imagining relationship events, and physical and mental health. *Journal of Counseling Psychology*, *48*(4), 447–455. doi:10.1037/0022-0167.48.4.447

Berry, J. W., Worthington, E. L., O'Connor, L. E., Parrott, L., & Wade, N. G. (2005). Forgivingness, vengeful rumination, and affective traits. *Journal of Personality*, *73*(1), 183–225. doi:10.1111/j.1467-6494.2004.00308.x

Blasczyk-Schiep, S., Kazen, M., Jaworska-Andryszewska, P., & Kuhl, J. (2018). Volitional determinants of self-harm behaviour and suicidal risk in persons with borderline personality disorder. *The European Journal of Psychiatry*, *32*(2), 77–86. doi:10.1016/j.ejpsy.2017.10.003

Boggiss, A. L., Consedine, N. S., Brenton-Peters, J. M., Hofman, P. L., & Serlachius, A. S. (2020). A systematic review of gratitude interventions: Effects on physical health and health behaviors. *Journal of Psychosomatic Research*, *135,* 1 - 10. doi:10.1016/j.jpsychores.2020.110165

Bradley, D. F., Exline, J. J., & Uzdavines, A. (2017). Relational reasons for nonbelief in the existence of gods: An important adjunct to intellectual nonbelief. *Psychology of Religion and Spirituality*, *9*(4), 319-327. doi:10.1037/rel0000073

Bradley, D. F., Exline, J. J., Uzdavines, A., Stauner, N., & Grubbs, J. B. (2018). The Reasons of Atheists and Agnostics for Nonbelief in God's Existence Scale: Development and initial validation. *Psychology of Religion and Spirituality*, *10*(3), 263–275. doi:10.1037/rel0000199

Brailovskaia, J., Teismann, T., Zhang, X. C., & Margraf, J. (2019). Grandiose narcissism, depression and suicide ideation in Chinese and German students. *Current Psychology*, 1–9. doi:10.1007/s12144-019-00355-1

Brelsford, G. M., Fulmer, M. E., Harrison, M. A., & Xu, X. (2014). Religious coping and gratitude in emerging adulthood. *Research in the Social Scientific Study of Religion*, *25*, 32–52. doi:10.1163/9789004272385_004

Brown, G. K., Beck, A. T., Steer, R. A., & Grisham, J. R. (2000). Risk factors for suicide in psychiatric outpatients: A 20-year prospective study. *Journal of Consulting and Clinical Psychology*, *68*(3), 371–377. doi:10.1037/0022-006X.68.3.371

Bryan, C. J., & Harris, J. A. (2019). The structure of suicidal beliefs: A Bifactor analysis of the Suicide Cognitions Scale. *Cognitive Therapy and Research*, *43*(2), 335–344. doi:10.1007/s10608-018-9961-2

Campos, R. C., & Holden, R. R. (2016). Portuguese version of the Suicidal Behaviors Questionnaire-Revised: Validation data and the establishment of a cut-score for screening purposes. *European Journal of Psychological Assessment*. doi:10.1027/1015-5759/a000385

Caribé, A. C., Studart, P., Bezerra-Filho, S., Brietzke, E., Noto, M. N., Vianna-Sulzbach, M., Kapczinski, F., Neves, F. S., Correa, H., & Miranda-Scippa, Â. (2015). Is religiosity a protective factor against suicidal behavior in bipolar I outpatients? *Journal of Affective Disorders*, *186*, 156-161. doi:10.1016/j.jad.2015.07.024

Carrothers, R. M. (2010). Identity consequences of religious changing: Effects of motivation for change on identity outcomes. *Sociological Focus*, *43*(1), 150-162. doi:10.1080/00380237.2010.10571373

Centers for Disease Control. (2017). Web-based Injury Statistics Query and Reporting System. Retrieved March 15, 2019, from https://webappa.cdc.gov/sasweb/ncipc/mortrate.html

Chan, M., Tsai, K. M., & Fuligni, A. J. (2015). Changes in religiosity across the transition to young adulthood. *Journal of Youth and Adolescence*, *44*(8), 1555–1566. doi:10.1007/s10964-014-0157-0

Charzyńska, E. (2015). Sex differences in spiritual coping, forgiveness, and gratitude before and after a basic alcohol addiction treatment program. *Journal of Religion and Health*, *54*(5), 1931–1949. doi:10.1007/s10943-015-0002-0

Chen, L. H., Chen, M. Y., Kee, Y. H., & Tsai, Y. M. (2009). Validation of the gratitude questionnaire (GQ) in Taiwanese undergraduate students. *Journal of Happiness Studies*, *10*(6), 655–664. doi:10.1007/s10902-008-9112-7

Chu, C., Buchman-Schmitt, J. M., Stanley, I. H., Hom, M. A., Tucker, R. P., Hagan, C. R., Rogers, M. L., Podlogar, M. C., Chiurliza, B., Ringer, F. B., Michaels, M. S., Patros, C. H.

G., & Joiner, T. E. (2017). The interpersonal theory of suicide: A systematic review and meta-analysis of a decade of cross-national research. *Psychological Bulletin*, *143*(12), 1313–1345. doi:10.1037/bul0000123

Chung, M.-S. (2016). Relation between lack of forgiveness and depression. *Psychological Reports*, *119*(3), 573–585. doi:10.1177/0033294116663520

Cleare, S., Gumley, A., & O'Connor, R. C. (2019). Self-compassion, self-forgiveness, suicidal ideation, and self-harm: A systematic review. *Clinical Psychology & Psychotherapy*, *26*(5), 511–530. doi:10.1002/cpp.2372

Cohen M. (2002). Convergence: maturation and integration in the course of a religious conversion. *J Am Acad Psychoanal*, *30*(3), 383-400. doi: 10.1521/jaap.30.3.383.21969.

Connors, G. J., Tonigan, J. S., & Miller, W. R. (1996). A measure of religious background and behavior for use in behavior change research. *Psychology of Addictive Behaviors 19%*, *10*(2), 90–96.

Consoloni, J. L., Chérif Ibrahim, E., Lefebvre, M.-N., Zendjidjian, X., Olié, E., Mazzola-Pomietto, P., Desmidt, T., Samalin, L., Llorca, P. M., Abbar, M., Lopez-Castroman, J., Haffen, E., Baumstarck, K., Naudin, J., Azorin, J. M., El-Hage, W., Courtet, P., & Belzeaux, R. (2018). Serotonin transporter gene expression predicts the worsening of suicidal ideation and suicide attempts along a long-term follow-up of a Major Depressive Episode. *European Neuropsychopharmacology*, *28*, 401–414. doi:10.1016/j.euroneuro.2017.12.015

Cooper, M. J., Pullig, C., & Dickens, C. (2018). Effects of narcissism and religiosity on church ministers with respect to ethical judgment, confidence, and forgiveness. *Journal of Psychology and Theology*, *44*(1), 42–54. doi:10.1177/009164711604400104

Cottingham, J. (2013). Conversion, self-discovery, and moral change. In I. Dalferth & M. Rogers (Eds.), *Conversion*, (pp. 311 – 239), Claremont Studies in the Philosophy of Religion. Mohr Siebeck.

Cragun, R. T., & Hammer, J. H. (2011). “One person’s apostate is another person’s convert”: What terminology tells us about pro-religious hegemony in the sociology of religion. *Humanity & Society*, *35*(1/2), 149–175. doi:10.1177/016059761103500107

Crosby, A. E., Han, B., Ortega, L. A. G., Parks, S. E., & Gfroerer, J. (2011). *Suicidal thoughts and behaviors among adults aged ≥18 Years - United States, 2008-2009*. Atlanta, GA. Retrieved from https://www.cdc.gov/mmwr/preview/mmwrhtml/ss6013a1.htm

Currier, J. M., McDermott, R. C., McCormick, W. H., Churchwell, M. C., & Milkeris, L. (2018). Exploring cross-lagged associations between spiritual struggles and risk for suicidal behavior in a community sample of military veterans. *Journal of Affective Disorders*, *230*, 93–100. doi:10.1016/j.jad.2018.01.009

Currier, J. M., Smith, P. N., & Kuhlman, S. (2017). Assessing the unique role of religious coping in suicidal behavior among U.S. Iraq and Afghanistan veterans. *Psychology of Religion and Spirituality*, *9*(1), 118–123. doi:10.1037/rel0000055

Dangel, T. J., Webb, J. R., & Hirsch, J. K. (2018). Forgiveness and suicidal behavior: Cynicism and psychache as serial mediators. *The Journal of Psychology*, *152*(2), 77–95. doi:10.1080/00223980.2017.1408555

Davis, D. E., Hook, J. N., Worthington, E. L., Van Tongeren, D. R., Gartner, A. L., Ii, D. J. J., & Emmons, R. A. (2011). Relational humility: Conceptualizing and measuring humility as a personality judgment. *Journal of Personality Assessment*, *93*(3), 225–234. doi:10.1080/00223891.2011.558871

Davis, D. E., Worthington, E. L., & Hook, J. N. (2010). Humility: Review of measurement strategies and conceptualization as personality judgment. *The Journal of Positive Psychology, 5(4),* 243–252. doi:10.1080/17439761003791672

Davis, D. E., Worthington, E. L., Jr., Hook, J. N., Emmons, R. A., Hill, P. C., Bollinger, R. A., & Van Tongeren, D. R. (2013). Humility and the development and repair of social bonds: Two longitudinal studies. *Self and Identity*, *12*(1), 58–77. doi:10.1080/15298868.2011.636509

Dezutter, J., Toussaint, L., & Leijssen, M. (2016). Forgiveness, ego-integrity, and depressive symptoms in community-dwelling and residential elderly adults. *The Journals of Gerontology* , *71*(5), 786–797. doi:10.1093/geronb/gbu146

Disabato, D. J., Kashdan, T. B., Short, J. L., & Jarden, A. (2017). What predicts positive life events that influence the course of depression? A longitudinal examination of gratitude and meaning in life. *Cognitive Therapy and Research*, *41*(3), 1–15. doi:10.1007/s10608-016-9785-x

Ducasse, D., Dassa, D., Courtet, P., Brand, A. V., Walter, A., Guillaume, S., Jaussent, I., & Olié, E. (2019). Gratitude diary for the management of suicidal inpatients: A randomized controlled trial. *Depression and Anxiety*, *36*(5), 400–411. doi:10.1002/da.22877

Ellison, C. G., & Lee, J. (2010). Spiritual struggles and psychological distress: Is there a dark side of religion? *Social Indicators Research*, *98*(3), 501–517. doi:10.1007/s11205-009-9553-3

Emmons, R. A., & Crumpler, C. A. (2000). Gratitude as a human strength: Appraising the evidence. *Journal of Social and Clinical Psychology*, *19*(1), 56–69. doi:10.1521/jscp.2000.19.1.56

Emmons, R. A., & Kneezel, T. T. (2005). Giving thanks: Spiritual and religious correlates of gratitude. *Journal of Psychology and Christianity*, *24*(2), 140–148.

Emmons, R. A., & McCullough, M. E. (2003). Counting blessings versus burdens: An experimental investigation of gratitude and subjective well-being in daily life. *Journal of Personality and Social Psychology*, *84*(2), 377–389. doi:10.1037/0022-3514.84.2.377

Escher, D. (2013). How does religion promote forgiveness? Linking beliefs, orientations, and practices. *Journal for the Scientific Study of Religion*, *52*(1), 100–119. doi:10.1111/jssr.12012

Exline, J. J., & Geyer, A. L. (2004). Perceptions of humility: A preliminary study. *Self and Identity*, *3*(2), 95–114. doi:10.1080/13576500342000077

Exline, J. J., Homolka, S. J., & Harriott, V. A. (2016). Divine struggles: Links with body image concerns, binging, and compensatory behaviours around eating. *Mental Health, Religion & Culture*, *19*(1), 8-22. doi:10.1080/13674676.2015.1087977

Exline, J. J., & Martin, A. (2005). Anger toward God: A new frontier in forgiveness research. In E. L. Worthington Jr. (Eds.), *Handbook of forgiveness.,* (pp. 73–88). Routledge/Taylor & Francis Group, New York, NY.

Exline, J. J., Pargament, K. I., Grubbs, J. B., & Yali, A. M. (2014). The Religious and Spiritual Struggles Scale: Development and initial validation. *Psychology of Religion and Spirituality*, *6*(3), 208–222. doi:10.1037/a0036465.supp

Exline, J. J., Park, C. L., Smyth, J. M., & Carey, M. P. (2011). Anger toward God: Social-cognitive predictors, prevalence, and links with adjustment to bereavement and cancer. *Journal of Personality and Social Psychology*, *100*(1), 129–148. doi:10.1037/a0021716

Exline, J. J., Prince-Paul, M., Root, B. L., & Peereboom, K. S. (2013). The spiritual struggle of anger toward God: A study with family members of hospice patients. *Journal of Palliative Medicine*, *16*(4), 369–375. doi:10.1089/jpm.2012.0246

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, NY: Guilford Press.

Exline, J. J., Van Tongeren, D. R., Bradley, D. F., Wilt, J. A., Stauner, N., Pargament, K. I., & DeWall, C. N. (2020). Pulling away from religion: Religious/spiritual struggles and religious disengagement among college students. *Psychology of Religion and Spirituality*. Advanced online publication. doi:10.1037/rel0000375

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*(12), 1481–1496. doi:10.1002/1097-4679(200012)56:12<1481::AID-1>3.0.CO;2-A

Eynan, R., Langley, J., Tolomiczenko, G., Rhodes, A. E., Links, P., Wasylenki, D., & Goering, P. (2002). The association between homelessness and suicidal ideation and behaviors: results of a cross-sectional survey. *Suicide & Life-Threatening Behavior*, *32*(4), 418–427.

Fang, M. (2018). School poverty and the risk of attempted suicide among adolescents. *Social Psychiatry and Psychiatric Epidemiology*, *53*(9), 955–967. doi:10.1007/s00127-018-1544-8

Feigelman, W., Cerel, J., Mcintosh, J. L., Brent, D., & Gutin, N. (2018). Suicide exposures and bereavement among American adults: Evidence from the 2016 General Social Survey. *Journal of Affective Disorders*, *227*, 1–6. doi:10.1016/j.jad.2017.09.056

Fenelon, A., & Danielsen, S. (2016). Leaving my religion: Understanding the relationship between religious disaffiliation, health, and well-being. *Social Science Research*, *57*, 49–62.

doi:10.1016/j.ssresearch.2016.01.007

Fincham, F. D., & May, R. W. (2019). Divine forgiveness protects against psychological distress following a natural disaster attributed to God. *The Journal of Positive Psychology*. doi:10.1080/17439760.2019.1689411

Fisher, A. R. (2017). A review and conceptual model of the research on doubt, disaffiliation, and related religious changes. *Psychology of Religion and Spirituality*, *9*(4), 358–367. doi:10.1037/rel0000088

Fitzgerald, M. L., Kassir, S. A., Underwood, M. D., Bakalian, M. J., Mann, J. J., & Arango, V. (2017). Dysregulation of striatal dopamine receptor binding in suicide. *Neuropsychopharmacology*, *42*(4), 974–982. doi:10.1038/npp.2016.124

Forster, M., Grigsby, T. J., Gower, A. L., Mehus, C. J., & McMorris, B. J. (2020). The role of social support in the association between childhood adversity and adolescent self-injury and suicide: Findings from a statewide sample of high school students. *Journal of Youth and Adolescence*, *49*(6), 1195-1208. doi:10.1007/s10964-020-01235-9

Franco, M., & McElroy-Heltzel, S. (2019). Let me choose: Primary caregiver cultural humility, racial identity, and mental health for multiracial people. *Journal of Counseling Psychology*, *66*(3), 269–279. doi:10.1037/cou0000317

Franz, P. J., Kleiman, E. M., & Nock, M. K. (2021). Reappraisal and suppression each moderate the association between stress and suicidal ideation: Preliminary evidence from a daily diary study. *Cognitive Therapy and Research*. https://doi.org/10.1007/s10608-021-10214-8

Froh, J. J., Yurkewicz, C., & Kashdan, T. B. (2009). Gratitude and subjective well-being in early adolescence: Examining gender differences. *Journal of Adolescence*, *32*, 633–650. doi:10.1016/j.adolescence.2008.06.006

Galfalvy, H., Currier, D., Oquendo, M. A., Sullivan, G., Huang, Y.-Y., & John Mann, J. (2009). Lower CSF MHPG predicts short-term risk for suicide attempt. *The International Journal of Neuropsychopharmacology*, *12*(10), 1327. doi:10.1017/S1461145709990228

Gebauer, J. E., Nehrlich, A. D., Sedikides, C., & Neberich, W. (2013). The psychological benefits of income are contingent on individual-level and culture-level religiosity. *Social Psychological and Personality Science*, *4*(5), 569–578. doi:10.1177/1948550612469819

George, L. K., Larson, D. B., Koenig, H. G., & McCullough, M. E. (2000). Spirituality and health: What we know, what we need to know. *Journal of Social and Clinical Psychology*, *19*(1), 102–116. doi:10.1521/jscp.2000.19.1.102

Gorsuch, R. L., & Hao, J. Y. (1993). Forgiveness: An exploratory factor analysis and its relationships to religious variables. *Review of Religious Research*, *34*(4), 333. doi:10.2307/3511971

Gouveia, V. V., Ribeiro, M. G. C., de Aquino, T. A. A., Loureto, G. D. L., Nascimento, B. S., & Rezende, A. T. (2019). Gratitude Questionnarie (GQ-6): Evidence of construct validity in Brazil. *Current Psychology*. doi:10.1007/s12144-019-00197-x

Greenwald, Y., Mikulincer, M., Granqvist, P., & Shaver, P. R. (2018). Apostasy and conversion : Attachment orientations and individual differences in the process of religious change. *Psychology of Religion and Spirituality*. doi:10.1037/rel0000239

Gregg, A. P., & Mahadevan, N. (2014). Intellectual arrogance and intellectual humility: An evolutionary-epistemological account. *Journal of Psychology and Theology*, *42*(1), 7–18. doi:10.1177/009164711404200102

Gulbas, L. E., Hausmann-stabile, C., Szlyk, H. S., Zayas, L. H., Gulbas, L. E., & Hausmann-stabile, C. (2019). Evaluating the Interpersonal–Psychological Theory of Suicide among

Latina adolescents using qualitative comparative analysis. *Qualitative Psychology*. doi:10.1037/qup0000131

Haggard, M., Rowatt, W. C., Leman, J. C., Meagher, B., Moore, C., Fergus, T., Whitcomb, D., Battaly, H., Baehr, J., & Howard-Snyder, D. (2018). Finding middle ground between intellectual arrogance and intellectual servility: Development and assessment of the limitations-owning intellectual humility scale. *Personality and Individual Differences*, *124*, 184–193. doi:10.1016/j.paid.2017.12.014

Haidt, J. (2009). The moral emotions. In R. J. Davidson, K. R. Scherer, & H. H. Goldsmith (Eds.), *Handbook of affective sciences* (pp. 852–870). New York, NY: Oxford University Press.

Halama, P., & Lačná, M. (2011). Personality change following religious conversion: Perceptions of converts and their close acquaintances. *Mental Health, Religion & Culture*, 14(8), 757–768. doi:10.1080/13674676.2010.522564

Hall, B. B., Webb, J. R., & Hirsch, J. K. (2020). Spirituality and suicidal behavior: The mediating role of self-forgiveness and psychache. *Psychology of Religion and Spirituality*, 12(1), 36–44. doi:10.1037/rel0000182

Hall, M. E. L., & McMinn, M. R. (2021). The lived religion of grace: Exploring diverse Christian narratives. *Psychology of Religion and Spirituality*. Advanced online publication. doi:10.1037/rel0000414

Hansen, M. J., Enright, R. D., Baskin, T. W., & Klatt, J. (2009). A palliative care intervention in forgiveness therapy for elderly terminally ill cancer patients. *Journal of Palliative Care*, *25*(1), 51–60. doi:10.1177/082585970902500106

Harris, E. C., & Barraclough, B. (2008). Suicide as an outcome for mental disorders. *British*

Journal of Psychiatry, *170*(03), 205–228. doi:10.1192/bjp.170.3.205

Harry Hui, C., Cheung, S. H., Lam, J., Ying Lau, E. Y., Cheung, S. F., & Yuliawati, L. (2018). Psychological changes during faith exit: A three-year prospective study. *Psychology of Religion and Spirituality*, *10*(2), 103–118. doi:10.1037/rel0000157

Hayes, A. F. (2013). *Introduction to Mediation, Moderation, and Conditional Process Analysis : A Regression-Based Approach*. Guilford Press.

Hayes, S. C., & Lillis, J. (2014). Acceptance and commitment therapy. In G. R. VandenBos, E. Meidenbauer, & J. Frank-McNeil (Eds.), *Psychotherapy theories and techniques: A reader.* (pp. 3–8). Washington, D.C.: American Psychological Association. doi:10.1037/14295-001

Hedegaard, H., Curtin S. C., & Warner M. (2020). Increase in suicide mortality in the United States, 1999–2018. *NCHS Data Brief, no 362*. Hyattsville, MD: National Center for Health Statistics.

Hedegaard, H., Curtin, S., & Warner, M. (2018). *Suicide rates in the United States continue to increase*. Hyattsville, MD. Retrieved from https://www.cdc.gov/nchs/products/databriefs/db309.htm

Heisel, M. J., Links, P. S., Conn, D., van Reekum, R., & Flett, G. L. (2007). Narcissistic personality and vulnerability to late-life suicidality. *The American Journal of Geriatric Psychiatry : Official Journal of the American Association for Geriatric Psychiatry*, *15*(9), 734–741. doi:10.1097/JGP.0b013e3180487caa

Heron, M. (2013). *Deaths: Leading Causes for 2013*. *National Vital Statistics Reports* (Vol. 65). Retrieved from http://www.cdc.gov/nchs/nvss/mortality_tables.htm#lcod.

Hill, E. M. (2016). The role of narcissism in health-risk and health-protective behaviors. *Journal*

of Health Psychology, *21*(9), 2021–2032. doi:10.1177/1359105315569858

Hill, P. L., Allemand, M., & Roberts, B. W. (2013). Examining the pathways between gratitude and self-rated physical health across adulthood. *Personaility and Individual Differences,* 54(1), 92-96. doi:10.1016/j.paid.2012.08.011

Hirsch, J. K., & Cukrowicz, K. C. (2014). Suicide in rural areas: An updated review of the literature. *Journal of Rural Mental Health*, *38*(2), 65–78. doi:10.1037/rmh0000018

Hirsch, J. K., Webb, J. R., & Jeglic, E. L. (2012). Forgiveness as a moderator of the association between anger expression and suicidal behaviour. *Mental Health, Religion & Culture*, *15*(3), 279–300. doi:10.1080/13674676.2011.571666

Hirsch, J. K., Webb, J. R., & Jeglic, E. L. (2011). Forgiveness, depression, and suicidal behavior among a diverse sample of college students. *Journal of Clinical Psychology*, *67*(9), 896–906. doi:10.1002/jclp.20812

Hook, J. N., & Davis, D. E. (2014). Humility, religion, and spirituality: Introduction to the special issue. *Journal of Psychology and Theology*, *42*(1), 3–6. doi:10.1177/009164711404200101

Hoskins, A. C. M., & Goldberg, A. D. (2009). Investigating the relationship between narcissism and emotion regulation difficulties: the role of grandiose and vulnerable traits. *Counselor Education and Supervision*, *14*(3), 1–11.

Howard, M., & Krannitz, M. (2017). A reanalysis of occupation and suicide: Negative perceptions of the workplace linked to suicide attempts. *The Journal of Psychology*, *151*(8), doi:10.1080/00223980.2017.1393378

Hui, C. H., Cheung, S. H., Lam, J., Lau, E. Y. Y., Yuliawati, L., & Cheung, S. F. (2017). In search of the psychological antecedents and consequences of Christian conversion: A three-

year prospective study. *Psychology of Religion and Spirituality*, *9*(2), 220–230. doi:10.1037/rel0000082

Jaksic, N., Marcinko, D., Hanzek, M. S., Rebernjak, B., & Ogrodniczuk, J. S. (2017). Experience of shame mediates the relationship between pathological narcissism and suicidal ideation in psychiatric outpatients. *Journal of Clinical Psychology*, *73*(12), 1670–1681. doi:10.1002/jclp.22472

Jankowski, P. J., & Sandage, S. J. (2018). Attachment to God and humility: Indirect effect and conditional effects models. *Journal of Psychology and Theology*, *42*(1), 70–82. doi:10.1177/009164711404200108

Jankowski, P. J., Sandage, S. J., & Hill, P. C. (2013). Differentiation-based models of forgivingness, mental health and social justice commitment: Mediator effects for differentiation of self and humility. *The Journal of Positive Psychology*, *8*(5), 412–424. dio:10.1080/17439760.2013.820337

Jankowski, P. J., Sandage, S. J., Ruffing, E. G., Crabtree, S. A., Bell, C. A., & Park, S. H. (2021). A mixed-method intervention study on relational spirituality and humility among religious leaders. *Spirituality in Clinical Practice*. Advanced online publication. doi:10.1037/scp0000248

Johnson, C. V, & Hayes, J. A. (2003). Troubled spirits: Prevalence and predictors of religious and spiritual concerns among university students and counseling center clients. *Journal of Counseling Psychology*, *50*(4), 409–419. doi:10.1037/0022-0167.50.4.409

Johnson, S. K., & Armour, M. P. (2018). A hermeneutic phenomenological study of the lived experience of spiritual conversion in a neo-charismatic evangelical context. *Journal of Religion and Health*, *57*(5), 2013–2032. doi:10.1007/s10943-018-0672-5

Joiner, T. (2005). *Why people die by suicide*. Cambridge, MA: Harvard University Press.

Jong, J., Ross, R., Philip, T., Chang, S.-H., Simons, N., & Halberstadt, J. (2018). The religious correlates of death anxiety: A systematic review and meta-analysis. *Religion, Brain & Behavior*, *8*(1), 4–20. doi:10.1080/2153599X.2016.1238844

Jongkind, M., Van Den Brink, B., Schaap, J. H., Van Den Velde, N., & Braam, A. W. (2019). Dimensions of religion associated with suicide attempt and suicide ideation in depressed, religiously affiliated patients. *Suicide and Life-Threatening Behavior*, *49*(2), 505–519. doi:10.1111/sltb.12456

Kalliopuska, M. (1992). Attitudes toward health, health behaviour,and personality factors among school students very high on empathy. *Psychological Reports*, *70*(4), 1119. doi:10.2466/PR0.70.4.1119-1122

Karaırmak, Ö., & Güloğlu, B. (2014). Forgiveness and PTSD among veterans: The mediating role of anger and negative affect. doi:10.1016/j.psychres.2014.05.024

Keith, T. Z. (2015). Multiple regression and beyond: An introduction to multiple regression and structural equation modeling, 2nd ed. New York, NY: Routledge/Taylor & Francis Group.

Kelliher Rabon, J., Webb, J. R., Chang, E. C., & Hirsch, J. K. (2019). Forgiveness and suicidal behavior in primary care: Mediating role of future orientation. Journal of Spirituality in Mental Health, 21(1), 1–13. doi: 10.1080/19349637.2018.1469454

Kerr, S. L., O'Donovan, A., & Pepping, C. A. (2015). Can gratitude and kindness interventions enhance well-being in a clinical sample? *Journal of Happiness Studies: An Interdisciplinary Forum on Subjective Well-Being*, *16*(1), 17–36. doi:10.1007/s10902-013-9492-1

Kessler, R. C., Chiu, W. T., Demler, O., Walters, E. E., & Walters, E. E. (2005). Prevalence,

severity, and comorbidity of 12-month DSM-IV disorders in the national comorbidity survey replication. *Archives of General Psychiatry*, *62*(6), 617. doi:10.1001/archpsyc.62.6.617

Kim, Y.-K., Hwang, J.-A., Lee, H.-J., Yoon, H.-K., Ko, Y.-H., Lee, B.-H., Jung, H.-Y., Hahn, S.,-W., & Na, K.-S. (2014). Association between norepinephrine transporter gene (SLC6A2) polymorphisms and suicide in patients with major depressive disorder. *Journal of Affective Disorders*, *158*, 127–132. doi:10.1016/j.jad.2014.01.018

Kleiman, E. M., Adams, L. M., Kashdan, T. B., & Riskind, J. H. (2013a). Grateful individuals are not suicidal: Buffering risks associated with hopelessness and depressive symptoms. *Personality and Individual Differences*, *55*, 595–599. doi:10.1016/j.paid.2013.05.002

Kleiman, E. M., Adams, L. M., Kashdan, T. B., & Riskind, J. H. (2013b). Gratitude and grit indirectly reduce risk of suicidal ideations by enhancing meaning in life: Evidence for a mediated moderation model. *Journal of Research in Personality*, *47*(5), 539–546. doi:10.1016/J.JRP.2013.04.007

Kleiman, E. M., & Liu, R. T. (2018). An examination of the prospective association between religious service attendance and suicide: Explanatory factors and period effects. *Journal of Affective Disorders, 225,* 618–623. doi:10.1016/j.jad.2017.08.083

Klimek, V., Stockmeier, C., Overholser, J., Meltzer, H. Y., Kalka, S., Dilley, G., & Ordway, G. A. (1997). Reduced levels of norepinephrine transporters in the locus coeruleus in major depression. *The Journal of Neuroscience : The Official Journal of the Society for Neuroscience*, *17*(21), 8451–8458. doi:10.1523/JNEUROSCI.17-21-08451.1997

Knabb, J. J., Vazquez, V. E., Garzon, F. L., Ford, K. M., Wang, K. T., Conner, K. W., Warren, S. E., & Weston, D. M. (2020). Christian meditation for repetitive negative thinking: A

multisite randomized trial examining the effects of a 4-week preventative program. *Spirituality in Clinical Practice*, *7*(1), 34–50. doi:10.1037/scp0000206

Koenig, H. G., Berk, L. S., Daher, N. S., Pearce, M. J., Bellinger, D. L., Robins, C. J., Nelson, B., Shaw, S. F., Cohen, H. J., & King, M. B. (2014). Religious involvement is associated with greater purpose, optimism, generosity and gratitude in persons with major depression and chronic medical illness. *Journal of Psychosomatic Research*, *77*(2), 135–143. doi:10.1016/j.jpsychores.2014.05.002

Koenig, H. G., Pearce, M. J., Nelson, B., & Daher, N. (2015). Effects of religious versus standard cognitive-behavioral therapy on optimism in persons with major depression and chronic medical illness. *Depression and Anxiety*, *32*(11), 835–842. https://doi.org/10.1002/da.22398

Kong, F., You, X., & Zhao, J. (2017). Evaluation of the Gratitude Questionnaire in a Chinese sample of adults: Factorial validity, criterion-related validity, and measurement invariance across sex. *Frontiers in Psychology*, 8(1). doi: 10.3389/fpsyg.2017.01498

Kopacz, M. S., Currier, J. M., Drescher, K. D., & Pigeon, W. R. (2016). Suicidal behavior and spiritual functioning in a sample of Veterans diagnosed with PTSD. *Journal of Injury & Violence Research*, *8*(1), 6–14. doi: 10.5249/jivr.v8i1.728

Krause, N. (2009). Religious involvement, gratitude, and change in depressive symptoms over time. *International Journal for the Psychology of Religion*, 19(3), 155–172. doi:10.1080/10508610902880204

Krause, N. (2010). Religious involvement, humility, and self-rated health. *Social Indicators Research*, *98*(1), 23–39. doi:10.1007/s11205-009-9514-x

Krause, N. (2012). Feelings of gratitude toward God among older whites, older African

Americans, and older Mexican Americans. *Research on Aging*, *34*(2), 156–173. doi:10.1177/0164027511417884

Krause, N. (2012). Religious involvement, humility, and change in self-rated health over time. *Journal of Psychology and Theology*, *40*(3), 199–210. doi:10.1177/009164711204000303

Krause, N. (2014). Exploring the relationships among humility, negative interaction in the church, and depressed affect. *Aging and Mental Health*, *18*(8), 970–979. doi:10.1080/13607863.2014.896867

Krause, N. (2017). Religious involvement and self-forgiveness, *20*(2), 128–142. do:10.1080/13674676.2017.1326477

Krause, N. (2018). Assessing the relationships among religion, humility, forgiveness, and self-rated health. *Research in Human Development*, *15*(1), 33–49. doi:10.1080/15427609.2017.1411720

Krause, N., & Hayward, R. D. (2014). Hostility, religious involvement, gratitude, and self-rated health in late life. *Research on Aging*, *36*(6), 731–752. doi:10.1177/0164027513519113

Krause, N., & Hayward, R. D. (2015). Humility, compassion, and gratitude to God: Assessing the relationships among key religious virtues. *Psychology of Religion and Spirituality*, *7*(3), 192–204. doi:10.1037/rel0000028

Krause, N., & Hayward, R. D. (2012). Informal support from a pastor and change in hope during late life. *Pastoral Psychology*, *61*(3), 305–318. doi:10.1007/s11089-011-0411-2

Krause, N., Emmons, R. A., & Ironson, G. (2015). Benevolent images of God, gratitude, and physical health status. *Journal of Religion and Health*, *54*(4), 1503–1519. doi:10.1007/s10943-015-0063-0

Krause, N., Pargament, K. I., Hill, P. C., & Ironson, G. (2016). Humility, stressful life events,

and psychological well-being: Findings from the Landmark Spirituality and Health Survey. *The Journal of Positive Psychology*, *11*(5), 499–510. doi:10.1080/17439760.2015.1127991

Krause, N., Pargament, K. I., Hill, P. C., & Ironson, G. (2017). Assessing the role of race/ethnicity in the relationships among spiritual struggles, health, and well-being. *American Journal of Orthopsychiatry*, *88*(2), 132–141. doi:10.1037/ort0000255

Krause, N., Pargament, K. I., Hill, P. C., Wong, S., & Ironson, G. (2017). Exploring the relationships among age, spiritual struggles, and health. *Journal of Religion, Spirituality & Aging*, *29*(4), 266–285. doi:10.1080/15528030.2017.1285844

Krause, N., Pargament, K. I., & Ironson, G. (2017). Spiritual struggles and health: Assessing the influence of socioeconomic status. *Journal for the Scientific Study of Religion*, *56*(3), 620–636. doi:10.1111/jssr.12364

Krumrei-Mancuso, E. J. (2018). Intellectual humility's links to religion and spirituality and the role of authoritarianism. *Personality and Individual Differences*, *130*, 65–75. doi:10.1016/j.paid.2018.03.037

Krumrei-Mancuso, E. J., & Rouse, S. V. (2016). The development and validation of the Comprehensive Intellectual Humility Scale. *Journal of Personality Assessment*, *98*(2), 209–221. doi:10.1080/00223891.2015.1068174

Kruse, E., Chancellor, J., Ruberton, P. M., & Lyubomirsky, S. (2014). An upward spiral between gratitude and humility. *Social Psychological and Personality Science*, *5*(7), 805–814. doi:10.1177/1948550614534700

Kyron, M. J., Badcock, A. C., Baker-Young, E., Stritzke, W. G. K., & Page, A. C. (2019). Dynamic changes in a desire to escape from interpersonal adversity: A fluid experimental

assessment of the Interpersonal Theory of Suicide. *Cognitive Therapy and Research*. doi:10.1007/s10608-019-10013-2

Krysinska, K., Lester, D., Lyke, J., & Corveleyn, J. (2015). Trait gratitude and suicidal ideation and behavior: An exploratory study. *Crisis: The Journal of Crisis Intervention and Suicide Prevention, 36(4),* 291–296. doi:10.1027/0227-5910/a000320

Kunst, J. L., Bjorck, J. P., & Tan, S.-Y. (2000). Causal attributions for uncontrollable negative events. *Journal of Psychology and Christianity*, *19*(1), 47–60.

Lambert, N. M., Fincham, F. D., Braithwaite, S. R., Graham, S. M., & Beach, S. R. H. (2009). Can prayer increase gratitude? *Psychology of Religion and Spirituality*, *1*(3), 139–149. doi:10.1037/a0016731

Langer, Á. I., Ulloa, V. G., Aguilar-Parra, J. M., Araya-Véliz, C., & Brito, G. (2016). Validation of a Spanish translation of the Gratitude Questionnaire (GQ-6) with a Chilean sample of adults and high schoolers. *Health and Quality of Life Outcomes*, *14*, 53. doi:10.1186/s12955-016-0450-6

Lavelock, C. R., Griffin, B. J., Worthington, E. L., Benotsch, E. G., Lin, Y., Greer, C. L., Garthe, R. C., Coleman, J. A., Hughes, C. M., Davis, D. E., & Hook, J. N. (2016). A qualitative review and integrative model of gratitude and physical health. *Journal of Psychology and Theology*, *44*(1), 55–86. doi:10.1177/009164711604400105

Lavelock, C. R., Snipes, D. J., Griffin, B. J., Worthington, E. L., Davis, D. E., Hook, J. N., Benotsch, E. G., & Ritter, J. (2015). A conceptual model of forgiveness and health. In Loren Toussaint, Everett Worthington, & David Williams (Eds.), *Forgiveness and Health* (pp. 29–42). Dordrecht: Springer Netherlands. doi:10.1007/978-94-017-9993-5_3

Lavelock, C. R., Worthington, E. L., Davis, D. E., Griffin, B. J., Reid, C. A., Hook, J. N., & Van Tongeren, D. R. (2014). The quiet virtue speaks: An intervention to promote humility. *Journal of Psychology and Theology*, 42(1), 99–110. doi:10.1177/009164711404200111

Lavelock, C. R., Worthington, E. L., Griffin, B. J., Garthe, R. C., Elnasseh, A., Davis, D. E., & Hook, J. N. (2017). Still waters run deep: Humility as a master virtue. *Journal of Psychology and Theology*, *45*(4), 286–303. doi:10.1177/009164711704500404

Law, K. C., & Tucker, R. P. (2018). Repetitive negative thinking and suicide: A burgeoning literature with need for further exploration. *Current Opinion in Psychology*, *22*, 68–72. doi:10.1016/j.copsyc.2017.08.027

Lawler-Row, K. A., Karremans, J. C., Scott, C., Edlis-Matityahou, M., & Edwards, L. (2008). Forgiveness, physiological reactivity and health: The role of anger. *International Journal of Psychophysiology 68(1), 51-58.* doi:10.1016/j.ijpsycho.2008.01.001

Lawler-Row, K. A., Scott, C. A., Raines, R. L., Edlis-Matityahou, M., & Moore, E. W. (2007). The varieties of forgiveness experience: Working toward a comprehensive definition of forgiveness. *Journal of Religion and Health*, *46*(2), 233–248. doi.:10.1007/s10943-006-9077-y

Lawler, K. A., Younger, J. W., Piferi, R. L., Jobe, R. L., Edmondson, K. A., & Jones, W. H. (2005). The unique effects of forgiveness on health: An exploration of pathways. *Journal of Behavioral Medicine*, *28*(2), 157–167. doi:10.1007/s10865-005-3665-2

Leary, M. R., Diebels, K. J., Davisson, E. K., Jongman-Sereno, K. P., Isherwood, J. C., Raimi, K. T., Deffler, S. A., & Hoyle, R. H. (2017). Cognitive and interpersonal features of intellectual humility. *Personality and Social Psychology Bulletin*, *43*(6), 793–813.

doi:10.1177/0146167217697695

Lechner, C. M., & Leopold, T. (2015). Religious attendance buffers the impact of unemployment on life satisfaction: Longitudinal evidence from Germany. *Journal for the Scientific Study of Religion*, *54*(1), 166–174. doi:10.1111/jssr.12171

Lee, Y.-R., & Enright, R. D. (2014). A forgiveness intervention for women with fibromyalgia who were abused in childhood: A pilot study. *Spirituality in Clinical Practice*, *1*(3), 203–217. doi:10.1037/scp0000025.supp

Lee, Y.-R., & Enright, R. D. (2019). A meta-analysis of the association between forgiveness of others and physical health. *Psychology & Health*, 1–18. doi:10.1080/08870446.2018.1554185

Lew, B., Chistopolskaya, K., Liu, Y., Talib, M. A., Mitina, O., & Zhang, J. (2019). Testing the Strain Theory of Suicide-The moderating role of social support. *Crisis: The Journal of Crisis Intervention and Suicide Prevention*. doi:10.1027/0227-5910/a000604

Li, D., & He, L. (2007). Meta-analysis supports association between serotonin transporter (5-HTT) and suicidal behavior. *Molecular Psychiatry*, *12*(1), 47–54. doi:10.1038/sj.mp.4001890

Li, D., Zhang, W., Li, X., Li, N., & Ye, B. (2012). Gratitude and suicidal ideation and suicide attempts among Chinese adolescents: Direct, mediated, and moderated effects. *Journal of Adolescence*, *35*(1), 55–66. doi:10.1016/j.adolescence.2011.06.005

Long, K. N., Worthington, E. L., VanderWeele, T. J., & Chen, Y. (2020). Forgiveness of others and subsequent health and well-being in mid-life: A longitudinal study on female nurses. *BMC Psychology*, *8*(1), 1-11. doi: 10.1186/s40359-020-00470-w

Luna, L. M. R., Van Tongeren, D. R., & Witvliet, C. V. O. (2017). Virtue, positive psychology,

and religion: Consideration of an overarching virtue and an underpinning mechanism. *Psychology of Religion and Spirituality*, *9*(3), 299–302. doi:10.1037/rel0000127

Lutjen, L. J., Silton, N. R., & Flannelly, K. J. (2012). Religion, forgiveness, hostility and health: A structural equation analysis. *Journal of Religion and Health*, *51*(2), 468–478. doi:10.1007/s10943-011-9511-7

Măirean, C., Turliuc, M. N., & Arghire, D. (2019). The relationship between trait gratitude and psychological wellbeing in university students: The mediating role of affective state and the moderating role of state gratitude. *Journal of Happiness Studies: An Interdisciplinary Forum on Subjective Well-Being*, *20*(5), 1359–1377. doi:10.1007/s10902-018-9998-7

Malhotra, D. (2010). (When) are religious people nicer? Religious salience and the "Sunday effect" on pro-social behavior. *Judgment and Decision Making*, *5*(2), 138–143.

Mann, J. J., & Currier, D. (2016). Relationships of genes and early-life experience to the neurobiology of suicidal behavior. In Rory C. O'Connor & Jane Pirkis (Eds.), *The International Handbook of Suicide Prevention* (pp. 149–169). Chichester, UK: John Wiley & Sons, Ltd. doi:10.1002/9781118903223.ch9

Marriott, R. J., Hall, M. E. L., & Decker, L. A. (2019). Psychological correlates of reasons for nonbelief: Tolerance of ambiguity, intellectual humility, and attachment. *Mental Health, Religion & Culture*, *22*(5), 480–499. doi:10.1080/13674676.2019.1625313

Martin, C., Vujanovic, A., & Day, S. X. (2017). Posttraumatic stress disorder symptom severity and emotion regulation in acute-care psychiatric inpatients: Associations with suicidality. *Journal of Aggression, Maltreatment & Trauma*, *26*(9), 1024–1041. doi:10.1080/10926771.2017.1341443

McCullough, M. E., Emmons, R. A., & Tsang, J.-A. (2002). The grateful disposition: A

conceptual and empirical topography. doi:10.1037/0022-3514.82.1.112

Mccullough, M. E., Kilpatrick, S. D., Emmons, R. A., & Larson, D. B. (2001). Is gratitude a moral affect? *Psychological Bulletin*, *127*(2), 249–266. doi:10.1037/0033-2909.127.2.249

Mccullough, M. E., Tsang, J.-A., & Emmons, R. A. (2004). Gratitude in intermediate affective terrain: Links of grateful moods and individual differences and daily emotional experiences. *Journal of Personality and Social Psychology*, *86*(2), 295–309. doi:10.1037/0022-3514.86.2.295

McCullough, M. E., & Willoughby, B. L. B. (2009). Religion, self-regulation, and self-control: Associations, explanations, and implications. *Psychological Bulletin*, *135*(1), 69–93. doi:10.1037/a0014213

Mills, P. J., Redwine, L., Wilson, K., Pung, M. A., Chinh, K., Greenberg, B. H., Ottar, L., Maisel, A., Raisinghani, A., Wood, A., & Chopra, D. (2015). The role of gratitude in spiritual well-being in asymptomatic heart failure patients. *Spirituality in Clinical Practice*, *2*(1), 5–17. doi:10.1037/scp0000050

Montemarano, V., Troister, T., Lambert, C. E., & Holden, R. R. (2018). A four-year longitudinal study examining psychache and suicide ideation in elevated-risk undergraduates: A test of Shneidman's model of suicidal behavior. *Journal of Clinical Psychology*, *74*(10), 1820–1832. doi:10.1002/jclp.22639

Mullet, E., Barros, J., Veronica Usai, L. F., Neto, F., & Riviere Shafighi, S. (2003). Religious involvement and the forgiving personality. *Journal of Personality*, *71*(1), 1–19. doi:10.1111/1467-6494.t01-1-00003

Murphy, P. E., Fitchett, G., & Emery-Tiburcio, E. E. (2016). Religious and spiritual struggle: Prevalence and correlates among older adults with depression in the BRIGHTEN

Program. *Mental Health, Religion & Culture, 19*(7), 713–721. doi:10.1080/13674676.2016.1244178

Murphy, S. L., Xu, J., Kochanek, K. D., & Arias, E. (2017). *Mortality in the United States, 2017 Key findings Data from the National Vital Statistics System*. Retrieved from https://www.cdc.gov/nchs/data/databriefs/db328_tables-508.pdf#1.

Nigg, J. T. (2017). Annual research review: On the relations among self-regulation, self-control, executive functioning, effortful control, cognitive control, impulsivity, risk-taking, and inhibition for developmental psychopathology. *Journal of Child Psychology and Psychiatry, and Allied Disciplines*, *58*(4), 361–383. doi: 10.1111/jcpp.12675

Nordt, C., Warnke, I., Seifritz, E., & Kawohl, W. (2015). Modelling suicide and unemployment: a longitudinal analysis covering 63 countries, 2000-11. *The Lancet. Psychiatry*, *2*(3), 239–245. doi:10.1016/S2215-0366(14)00118-7

Nie, G., Du, J., Liu, J., Yuan, L., & Ma, Z., (2020). Job stress and suicidal ideation among Chinese clinicians: The moderating role of social support. *Journal of General Psychology*, *147*(2):109-122. doi:10.1080/00221309.2019.1640657

Nishi, D., Susukida, R., Kuroda, N., & Wilcox, H. C. (2017). The association of personal importance of religion and religious service attendance with suicidal ideation by age group in the National Survey on Drug Use and Health. *Psychiatry Research, 255,* 321–327. doi:10.1016/j.psychres.2017.06.007

Nsamenang, S. A., Webb, J. R., Cukrowicz, K. C., & Hirsch, J. K. (2013). Depressive symptoms and interpersonal needs as mediators of forgiveness and suicidal behavior among rural primary care patients. *Journal of Affective Disorders*, *149*, 282–290. doi:10.1016/j.jad.2013.01.042

Olson, R., Knepple Carney, A., & Hicks Patrick, J. (2019). Associations between gratitude and spirituality: An experience sampling approach. *Psychology of Religion and Spirituality, 11(4),* 449–452. doi10.1037/rel0000164.supp

Oostenbroek, J., & Vaish, A. (2019). The emergence of forgiveness in young children. *Child Development*, 90(6), 1969–1986. doi:10.1111/cdev.13069

Orathinkal, J., Vansteenwegen, A., & Burggraeve, R. (2008). Are demographics important for forgiveness? *The Family Journal*, *16*(1), 20–27. doi:10.1177/1066480707309542

Osman, A., Bagge, C. L., Gutierrez, P. M., Konick, L. C., Kopper, B. A., & Barrios, F. X. (2001). The Suicidal Behaviors Questionnaire-Revised (SBQ-R):Validation with clinical and nonclinical samples. *Assessment*, *8*(4), 443–454. doi:10.1177/107319110100800409

Osterndorf, C., Enright, R., Holter, A., & Klatt, J. (2011). Treating adult children of alcoholics through forgiveness therapy. *Alcoholism Treatment Quarterly*, *29*(3), 274–292. doi:10.1080/07347324.2011.586285

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*(6), 713–730. doi:10.1177/1359105304045366

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*(4), 710. doi:10.2307/1388152

Park, C. L. (2013). *Religion and meaning*. In R. F. Paloutzian & C. L. Park (Eds.), Handbook of the psychology of religion and spirituality*., 2nd ed.* (pp. 357–379). The Guilford Press.

Park, C. L., Holt, C. L., Le, D., Christie, J., & Williams, B. R. (2018). Positive and negative

religious coping styles as prospective predictors of well-being in African Americans. *Psychology of Religion and Spirituality*, *10*(4), 318–326. doi:10.1037/rel0000124

Pearce, M. J., Koenig, H. G., Robins, C. J., Daher, N., Shaw, S. F., Nelson, B., Berk, L. S., Belinger, D., Cohen, H. J., & King, M. B. (2016). Effects of religious versus conventional cognitive-behavioral therapy on gratitude in major depression and chronic medical illness: A randomized clinical trial. *Journal of Spirituality in Mental Health*, *18*(2), 124–144. doi:10.1080/19349637.2015.1100971

Pearce, M. J., Koenig, H. G., Robins, C. J., Nelson, B., Shaw, S. F., Cohen, H. J., & King, M. B. (2015). Religiously integrated cognitive behavioral therapy: A new method of treatment for major depression in patients with chronic medical illness. *Psychotherapy*, *52*(1), 56-66. doi:10.1037/a0036448

Pearce, M. J., & Koenig, H. G. (2016). Spiritual struggles and religious cognitive behavioral therapy: A randomized clinical trial in those with depression and chronic medical illness. *Journal of Psychology and Theology*, *44*(1), 3–15. doi:10.1177/009164711604400101

Pescosolido, B. A., & Georgianna, S. (1989). Durkheim, suicide, and religion: Toward a network theory of suicide. *American Sociological Review*, *54*(1), 33. doi:10.2307/2095660

Phillips, J. A., & Hempstead, K. (2017). Differences in U.S. suicide rates by educational attainment, 2000-2014. *American Journal of Preventive Medicine*, *53*(4), 123–130. doi:10.1016/j.amepre.2017.04.010

Pitchot, W., Hansenne, M., Moreno, A. G., Pinto, E., Reggers, J., Fuchs, S., Pirard, S., & Ansseau, M. (2001). Reduced dopamine function in depressed patients is related to suicidal behavior but not its lethality. *Psychoneuroendocrinology*, *26*(7), 689–696. doi:10.1016/S0306-4530(01)00021-X

Pompili, M., Vichi, M., Qin, P., Innamorati, M., De Leo, D., & Girardi, P. (2013). Does the level of education influence completed suicide? A nationwide register study. *Journal of Affective Disorders*, *147*(1–3), 437–440. doi:10.1016/J.JAD.2012.08.046

Post, S. G., Pagano, M. E., Lee, M. T., & Johnson, B. R. (2016). Humility and 12-step recovery: A prolegomenon for the empirical investigation of a cardinal virtue in Alcoholics Anonymous. *Alcoholism Treatment Quarterly*, *34*(3), 262–273. doi:10.1080/07347324.2016.1182817

Quintana-Orts, C., & Rey, L. (2018). Forgiveness, depression, and suicidal behavior in adolescents: Gender differences in this relationship. *The Journal of Genetic Psychology: Research and Theory on Human Development*, *179*(2), 85–89. doi:10.1080/00221325.2018.1434478

Rahman, A., Iftikhar, R., Kim, J. J., & Enright, R. D. (2018). Pilot study: Evaluating the effectiveness of forgiveness therapy with abused early adolescent females in Pakistan. *Spirituality in Clinical Practice*, *5*(2), 75–87. doi:10.1037/scp0000160

Raines, A. M., Currier, J., McManus, E. S., Walton, J. L., Uddo, M., & Franklin, C. L. (2017). Spiritual struggles and suicide in veterans seeking PTSD treatment. *Psychological Trauma : Theory, Research, Practice and Policy*, *9*(6), 746–749. doi:10.1037/tra0000239

Raines, A. M., Macia, K. S., Currier, J., Compton, S. E., Ennis, C. R., Constans, J. I., & Franklin, C. L. (2020). Spiritual struggles and suicidal ideation in veterans seeking outpatient treatment: The mediating role of perceived burdensomeness. *Psychology of Religion and Spirituality*. Advanced online publication. doi10.1037/rel0000311

Rambo, L. R., & Bauman, S. C. (2012). Psychology of conversion and spiritual transformation. *Pastoral Psychology*, *61*(5–6), 879–894. doi:10.1007/s11089-011-0364-5

Reist Gibbel, M., Regueiro, V., & Pargament, K. I. (2019). A spiritually integrated intervention for spiritual struggles among adults with mental illness: Results of an initial evaluation. *Spirituality in Clinical Practice*, *6*(4), 240–255. doi:10.1037/scp0000207

Rey, L., Quintana-Orts, C., Mérida-López, S., & Extremera, N. (2019). Being bullied at school: Gratitude as potential protective factor for suicide risk in adolescents. *Frontiers in Psychology*, *10*(662), 1 - 10. doi:10.3389/fpsyg.2019.00662

Ripley, J. S., Worthington, E. L., Garthe, R. C., Davis, D. E., Hook, J. N., Reid, C. A., … Akpalu, B. (2018). Trait forgiveness and dyadic adjustment predict postnatal depression. *Journal of Child and Family Studies*, *27*(7), 2185–2192.doi:10.1007/s10826-018-1053-0

Roald, A. S. (2012). The conversion process in stages: New Muslims in the twenty-first century. *Islam and Christian-Muslim Relations, 23*(3), 347-362. doi:10.1080/09596410.2012.676782

Robustelli, B. L., & Whisman, M. A. (2018). Gratitude and life satisfaction in the United States and Japan. *Journal of Happiness Studies: An Interdisciplinary Forum on Subjective Well-Being*, *19*(1), 41–55. doi:10.1007/s10902-016-9802-5

Rogers, M. L., & Joiner, T. E. (2019). Exploring the temporal dynamics of the Interpersonal Theory of Suicide constructs: A dynamic systems modeling approach. *Journal of Consulting and Clinical Psychology*, *87*(1), 56–66. doi:10.1037/ccp0000373

Roof, W., & Perkins, R. (1975). On conceptualizing salience in religious commitment. *Journal for the Scientific Study of Religion*, 14(2), 111-128. doi:10.2307/1384735

Root Luna, L. M., Van Tongeren, D. R., & Witvliet, C. vanOyen. (2017). Virtue, positive psychology, and religion: Consideration of an overarching virtue and an underpinning

mechanism. *Psychology of Religion and Spirituality*, *9*(3), 299–302. doi:10.1037/rel0000127

Rosmarin, D. H., Malloy, M. C., & Forester, B. P. (2014). Spiritual struggle and affective symptoms among geriatric mood disordered patients. *International Journal of Geriatric Psychiatry*, *29*(6), 653–660. doi:10.1002/gps.4052

Rosmarin, D. H., Pirutinsky, S., Cohen, A. B., Galler, Y., & Krumrei, E. J. (2011). Grateful to God or just plain grateful? A comparison of religious and general gratitude. *The Journal of Positive Psychology, 6(5),* 389–396. doi:10.1080/17439760.2011.596557

Rosmarin, D. H., Pirutinsky, S., Greer, D., & Korbman, M. (2016). Maintaining a grateful disposition in the face of distress: The role of religious coping. *Psychology of Religion and Spirituality*, *8*(2), 134–140. doi:10.1037/rel0000021

Ross, S. R., Hertenstein, M. J., & Wrobel, T. A. (2007). Maladaptive correlates of the failure to forgive self and others: further evidence for a two-component model of forgiveness. *Journal of Personality Assessment*, *88*(2), 158–167. doi:10.1080/00223890701267985

Ross, S. R., Kendall, A. C., Matters, K. G., Wrobel, T. A., & Rye, M. S. (2004). A personological examination of self- and other-forgiveness in the five factor model. *Journal of Personality Assessment*, *82*(2), 207–214. doi:10.1207/s15327752jpa8202_8

Rowatt, W. C., Powers, C., Targhetta, V., Comer, J., Kennedy, S., & Labouff, J. (2006). Development and initial validation of an implicit measure of humility relative to arrogance. *The Journal of Positive Psychology*, *1*(4), 198–211. doi:10.1080/17439760600885671

Rowell, P. C., Cashwell, C. S., & Zambrowicz, R. (2019). Calm in the storm: The influence of spirituality, dispositional forgiveness, and God concept on anxiety. *Journal of Spirituality in Mental Health*, 1–12. doi:10.1080/19349637.2019.1593916

Rueda-Jaimes, G. E., Castro-Rueda, V. A., Rangel-Martínez-Villalba, A. M., Corzo-Casasadiego, J. D., Moreno-Quijano, C., & Camacho, P. A. (2017). Validity of the Suicide Behaviors Questionnaire-Revised in patients with short-term suicide risk. *The European Journal of Psychiatry*, *31*(4), 145–150. doi:10.1016/j.ejpsy.2017.09.002

Rusbult, C. E., Hannon, P. A., Stocker, S. L., & Finkel, E. J. (2007). Forgiveness and relational repair. In E. L. Worthington. (Ed.), *Handbook of Forgiveness* (pp. 185-205). New York, NY: Taylor and Francis. doi:10.4324/9780203955673-20

Sandage, S. J., Jankowski, P. J., Bissonette, C. D., & Paine, D. R. (2016). Vulnerable narcissism, forgiveness, humility, and depression: Mediator effects for differentiation of self. *Psychoanalytic Psychology*, *34*(3), 300–310. doi:10.1037/pap0000042

Sansone, R. A., Kelley, A. R., & Forbis, J. S. (2013). The relationship between forgiveness and history of suicide attempt. *Mental Health, Religion & Culture*, *16*(1), 31–37. doi:10.1080/13674676.2011.643860

Santiago, P. N., & Gall, T. L. (2016). Acceptance and commitment therapy as a spiritually integrated psychotherapy. *Counseling and Values*, *61(2)*, 239–254. doi:10.1002/cvj.12040

Satici, S. A., Uysal, R., & Akin, A. (2014). Forgiveness and vengeance: The mediating role of gratitude. *Psychological Reports*, *114*(1), 157–168. doi:10.2466/07.09.PR0.114k11w9

Schauman, O., Macleod, A. K., Thornicroft, G., & Clement, S. (2017). Mental illness related discrimination: The role of self-devaluation and anticipated discrimination for decreased well-being. *Stigma and Health*, *4*(1), 11–18. doi:10.1037/sah0000117

Schnitker, S. A., & Emmons, R. A. (2017). The psychology of virtue: Integrating positive psychology and the psychology of religion. *Psychology of Religion and Spirituality*, 9(3),

239–241. doi:10.1037/rel0000133

Sharma, V., Marin, D. B., Koenig, H. K., Feder, A., Iacoviello, B. M., Southwick, S. M., & Pietrzak, R. H. (2017). Religion, spirituality, and mental health of US military veterans: Results from the National Health and Resilience in Veterans Study. *Journal of Affective Disorders, 217,* 197–204. doi:10.1016/j.jad.2017.03.071

Sharma, S., & Singh, K. (2019). Religion and well-being: The mediating role of positive virtues. *Journal of Religion and Health*, *58*(1), 119–131. doi:10.1007/s10943-018-0559-5

Shepard, D. S., Gurewich, D., Lwin, A. K., Reed, G. A., & Silverman, M. M. (2015). Suicide and suicidal attempts in the United States: Costs and policy implications. doi:10.1111/sltb.12225

Shneidman, E. S. (1993). *Suicide as psychache : a clinical approach to self-destructive behavior*. Lanham, MD: J. Aronson. Retrieved from

Shneidman, E. S. (1996). *The suicidal mind*. New York, NY: Oxford University Press.

Shneidman, E. S. (2004). *Autopsy of a suicidal mind*. New York, NY: Oxford University Press.

Siah, P. C., & Tan, J. H. (2016). Religious coping and God locus of health control: Their relationships to health quality of life among people living with HIV in Malaysia. *Health Psychology Report*, *1*(1), 41–47. doi:10.5114/hpr.2017.62724

Sin, N. L., & Lyubomirsky, S. (2009). Enhancing well-being and alleviating depressive symptoms with positive psychology interventions: A practice-friendly meta-analysis. *Journal of Clinical Psychology*, *65*(5), 467–487. doi:10.1002/jclp.20593

Sirois, F. M., & Wood, A. M. (2017). Gratitude uniquely predicts lower depression in chronic illness populations: A longitudinal study of inflammatory bowel disease and arthritis. *Health Psychology*, *36*(2), 122–132. doi:10.1037/hea0000436

Smith, C. E., Noh, J. Y., Rizzo, M. T., & Harris, P. L.(2017). When and why parents prompt their children toapologize: The roles of transgression type and parent-ing style. *Journal of Family Studies*, 23, 38–61. doi:10.1080/13229400.2016.1176588

Snook, D. W., Branum-Martin, L., & Horgan, J. G. (2021). Zeal of the convert? Comparing religiousness between convert and nonconvert Muslims. *Psychology of Religion and Spirituality*. Advance online publication. doi:10.1037/rel0000421

Snook, D. W., Kleinmann, S. M., White, G., & Horgan, J. G. (2019). Conversion motifs among Muslim converts in the United States. *Psychology of Religion and Spirituality*. Advanced online publication. doi:10.1037/rel0000276

Stack, S. (1983). The effect of religious commitment on suicide: A cross-national analysis. *Journal of Health and Social Behavior*, *24*(4), 362–374. doi:10.2307/2136402

Stålsett, G., Gude, T., Rønnestad, M. H., & Monsen, J. T. (2012). Existential dynamic therapy ('VITA') for treatment-resistant depression with Cluster C disorder: Matched comparison to treatment as usual. *Psychotherapy Research*, *22*(5), 579–591. doi:10.1080/10503307.2012.692214

Stark, R., Doyle, D. P., & Rushing, J. L. (1983). Beyond Durkheim: Religion and suicide, *22*(2), 120–131. doi:10.2307/1385672

Steger, M. F., Pickering, N. K., Adams, E., Burnett, J., Shin, J. Y., Dik, B. J., & Stauner, N. (2010). The quest for meaning: Religious affiliation differences in the correlates of religious quest and search for meaning in life. *Psychology of Religion and Spirituality*, *2*(4), 206–226. doi:10.1037/a0019122

Streib, H., & Keller, B. (2003). The variety of deconversion experiences: Contours of a concept in respect to emperical research. *Archive of Religion and Psychology*, *26*(August), 181–200.

doi:10.1163/ 0084672053598030

Substance Abuse and Mental Health Services Administration [SAMHSA]. (2017). *Key substance use and mental health indicators in the United States: Results from the 2016 national survey on drug use and health*. Rockvill, MD.

Suda, A., Kawanishi, C., Kishida, I., Sato, R., Yamada, T., Nakagawa, M., Hasegawa, H., Kato, D., Furuno, T., & Hirayasu, Y. (2009). Dopamine D2 receptor gene polymorphisms are associated with suicide attempt in the Japanese population. *Neuropsychobiology*, *59*(2), 130–134. doi:10.1159/000213566

Sun, Z., Chen, H., Su, Z., Zhou, X., Zhang, S., Hao, W., & Zhang, R. (2012). The Chinese version of the Addiction Severity Index (ASI-C): Reliability, validity, and responsiveness in Chinese patients with alcohol dependence. doi:10.1016/j.alcohol.2012.08.005

Sunnqvist, C., Westrin, Å.˚, & Träskman-Bendz, L. (2008). Suicide attempters: Biological stressmarkers and adverse life events. *European Archives of Psychiatry and Clinical Neuroscience*, *258*(8), 456–462. doi:10.1007/s00406-008-0819-6

Sutherland, C. (1990). Changes in religious beliefs, attitudes, and practices following near-death experiences: An Australian study. *Journal of Near-Death Studies, 9(1),* 21–31. doi:10.1007/BF01074098

Szczesniak, R. D., Zou, Y., Stamper, S. M., & Grossoehme, D. H. (2017). Spiritual struggle in parents of children with cystic fibrosis increases odds of depression. *Depression Research and Treatment*, *2017*, 1–8. doi:10.1155/2017/5670651

Sztachańska, J., Krejtz, I., & Nezlek, J. B. (2019). Using a gratitude intervention to improve the lives of women with breast cancer: A daily diary study. *Frontiers in Psychology*, *10(1365),* 1 - 11. doi:10.3389/fpsyg.2019.01365

Tamás, Z., Kovacs, M., Gentzler, A. L., Tepper, P., Gádoros, J., Kiss, E., Kapornai, K., & Vetró, A. (2007). The relations of temperament and emotion self-regulation with suicidal behaviors in a clinical sample of depressed children in Hungary. *Journal of Abnormal Child Psychology*, *35*(4), 640–652. doi:10.1007/s10802-007-9119-2

Tangney, J. P. (2009). Humility. In C. R. Snyder & S. J. Lopez (Eds.), *Oxford Handbook of Positive Psychology* (pp. 411–419). New York, NY: Oxford University Press.

Tangney, J. P. (2000). Humility: Theoretical perspectives, empirical findings and directions for future research. *Journal of Social and Clinical Psychology*, *19*(1), 70–82. doi:10.1521/jscp.2000.19.1.70

Thauvoye, E., Granqvist, P., Golovchanova, N., & Dezutter, J. (2018). Attachment to God, depression and loss in late life: A longitudinal study. *Mental Health, Religion & Culture*, *21*(8), 825–837. doi:10.1080/13674676.2018.1552671

Thompson, L. Y., Snyder, C. R., Hoffman, L., Michael, S. T., Rasmussen, H. N., Billings, L., Heinze, L., Nuefeld, J. E., Shorey, H. S., Roberts, J. C., & Roberts, D. E. (2005). Dispositional forgiveness of self, others, and situations. *Journal of Personality*, *73*(2), 313–360. doi:10.1111/j.1467-6494.2005.00311.x

Thompson, R. G., Alonzo, D., Hu, M.-C., & Hasin, D. S. (2017). Substance use disorders and poverty as prospective predictors of adult first-time suicide ideation or attempt in the United States. *Community Mental Health Journal*, *53*(3), 324–333. doi:10.1007/s10597-016-0045-z

Toussaint, L. L., Owen, A. D., & Cheadle, A. (2012). Forgive to live: Forgiveness, health, and longevity. *Journal of Behavioral Medicine*, *35*(4), 375–386. doi:10.1007/s10865-011-9362-4

Toussaint, L. L., Shields, G. S., & Slavich, G. M. (2016). Forgiveness, stress, and health: a 5-

Week dynamic parallel process study. *Annals of Behavioral Medicine*, *50*(5), 727–735. doi:10.1007/s12160-016-9796-6

Trevino, K. M., Balboni, M., Zollfrank, A., Balboni, T., & Prigerson, H. G. (2014). Negative religious coping as a correlate of suicidal ideation in patients with advanced cancer. *Psycho-Oncology*, *23*(8), 936–945. doi:10.1002/pon.3505

Trivers, R. L. (1971). The evolution of reciprocal altruism. *The Quarterly Review of Biology*, *46*(1), 35–57.

Twenge, J. M., Cooper, A. B., Joiner, T. E., Duffy, M. E., & Binau, S. G. (2019). Age, period, and cohort trends in mood disorder indicators and suicide-related outcomes in a nationally representative dataset, 2005–2017. *Journal of Abnormal Psychology*, *128*(3), 185–199. doi:10.1037/abn0000410

Valdez, J. P. M., Yang, W., & Datu, J. A. D. (2017). Validation of the Gratitude Questionnaire in Filipino secondary school students. *The Spanish Journal of Psychology*, *20*, E45. doi:10.1017/sjp.2017.51

Valikhani, A., Ahmadnia, F., Karimi, A., & Mills, P. J. (2019). The relationship between dispositional gratitude and quality of life: The mediating role of perceived stress and mental health. *Personality and Individual Differences*, *141*, 40–46. doi:10.1016/j.paid.2018.12.014

Vannoy, S. D., Andrews, B. K., Atkins, D. C., Dondanville, K. A., Young-McCaughan, S., Peterson, A. L., & Strong STAR Consortium. (2017). Under reporting of suicide ideation in US Army population screening: An ongoing challenge. *Suicide and Life-Threatening Behavior*, *47*(6), 723-728. doi:10.1111/sltb.12318

Van Orden, K. A., Witte, T. K., Cukrowicz, K. C., Braithwaite, S. R., Selby, E. A., & Joiner, T. E. (2010). The interpersonal theory of suicide. *Psychological Review*, *117*(2), 575–600. doi:

10.1037/a0018697

Van Tongeren, D. R., Davis, D. E., Hook, J. N., Rowatt, W., & Worthington, E. L. (2017). Religious differences in reporting and expressing humility. doi:10.1037/rel0000118

Van Tongeren, D. R., DeWall, C. N., Chen, Z., Sibley, C. G., & Bulbulia, J. (2021). Religious residue: Cross-cultural evidence that religious psychology and behavior persist following deidentification. *Journal of Personality and Social Psychology*, *120*(2), 484–503. doi:10.1037/pspp0000288.supp

Van Vliet, N. K., Schaap-Jonker, H., Jongkind, M., van der Velde, N., van den Brink, A., & Braam, A. W. (2018). The associations between God representations and suicidality among Christian patients with a major depressive disorder. *Tijdschrift Voor Psychiatrie*, *60*(8), 511–520.

Virkkunen, M., De Jong, J., Bartko, J., & Linnoila, M. (1989). Psychobiological concomitants of history of suicide attempts among violent offenders and impulsive fire setters. *Archives of General Psychiatry*, *46*(7), 604. doi:10.1001/archpsyc.1989.01810070030004

Voas, D., & Chaves, M. (2016). Is the United States a counterexample to the secularization thesis? *American Journal of Sociology*, 121(5), 1517–1556. doi:10.1086/684202

Wang, C., Salle, T. La, Wu, C., Do, K. A., & Sullivan, K. E. (2018). School climate and parental involvement buffer the risk of peer victimization on suicidal thoughts and behaviors among Asian American middle school students. *Asian American Journal of Psychology*, *9*(4), 296–307. doi:10.1037/aap0000138

Webb, J. R., Bumgarner, D. J., Conway, E., Brevard, -Williams, Dangel, C. T., & Hall, B. B. (2017). A consensus definition of self-forgiveness: Implications for assessment and treatment. *Spirituality in Clinical Practice*, *4*(3), 216–227. doi:10.1037/scp0000138

Webb, J. R., Hirsch, J. K., & Toussaint, L. (2011). Forgiveness and alcohol problems: A review of the literature and a call for intervention-based research. *Alcoholism Treatment Quarterly*, *29*(3), 245–273. doi:10.1080/07347324.2011.585922

Webb, J. R., Hirsch, J. K., & Toussaint, L. (2015). Forgiveness as a positive psychotherapy for addiction and suicide: Theory, research, and practice. *Spirituality in Clinical Practice*, *2*(1), 48–60. doi:10.1037/scp0000054

Webb, J. R., Toussaint, L., & Conway-Williams, E. (2012). Forgiveness and health: Psycho-spiritual integration and the promotion of better healthcare. *Journal of Health Care Chaplaincy*, *18*, 57–73. doi:10.1080/08854726.2012.667317

Webb, J. R., Toussaint, L., & Dula, C. S. (2014). Ritualistic, theistic, and existential spirituality: Initial psychometric qualities of the RiTE measure of spirituality. *Journal of Religion and Health*, *53*(4), 972-985. doi:10.1007/s10943-013-9697-y

Webb, J. R., & Toussaint, L. L. (2020). Forgiveness, well-being, and mental health. In E. L. Worthington & N. G. Wade (Eds.), *Handbook of forgiveness, 2nd ed.* (pp. 188–197). Routledge/Taylor & Francis Group.

Weinberger, A. H., Gbedemah, M., Martinez, A. M., Nash, D., Galea, S., & Goodwin, R. D. (2018). Trends in depression prevalence in the USA from 2005 to 2015: Widening disparities in vulnerable groups. *Psychological Medicine*, *48*(8), 1308–1315. doi:10.1017/S0033291717002781

Wendt, D. C., Collins, S. E., Nelson, L. A., Serafini, K., Clifasefi, S. L., & Donovan, D. M. (2017). Religious and spiritual practices among homeless urban American Indians and Alaska natives with severe alcohol problems. *American Indian and Alaska Native Mental Health Research*, *24*(3), 39–62. doi:10.5820/aian.2403.2017.39

Wilks, D. C., Neto, F., & Mavroveli, S. (2015). Trait emotional intelligence, forgiveness, and gratitude in Cape Verdean and Portuguese students. *South African Journal of Psychology*, *45*(1), 93–101. doi:10.1177/0081246314546347

Wilt, J. A., Stauner, N., Harriott, V. A., Exline, J. J., & Pargament, K. I. (2019). Partnering with God: Religious coping and perceptions of divine intervention predict spiritual transformation in response to religious−spiritual struggle. *Psychology of Religion and Spirituality*, *11*(3), 278–290. doi:10.1037/rel0000221.supp

Wilt, J. A., Takahashi, J. T., Yun, D., Jeong, P., Exline, J. J., & Pargament, K. I. (2021). A mixed-methods study of communing with and complaining to the divine: Imagined conversations with God among undergraduates reporting religious and spiritual struggles. *Psychology of Religion and Spirituality*. doi:10.1037/rel0000405

Wirtz, D., Gordon, C. L., & Stalls, J. (2014). Gratitude and spirituality: A review of theory and research. In Religion and Spirituality Across Cultures, Chu Kim-Prieto (Ed.),. New York, NY: Springer. doi:10.1007/978-94-017-8950-9_15

Wong, Y. J., McKean Blackwell, N., Goodrich Mitts, N., Gabana, N. T., & Li, Y. (2017). Giving thanks together: A preliminary evaluation of the Gratitude Group Program. *Practice Innovations*, *2*(4), 243–257. doi:10.1037/pri0000058

Wood, C. (2017). Ritual well-being: toward a social signaling model of religion and mental health. *Religion, Brain & Behavior*, *7*(3), 223–243. doi:10.1080/2153599X.2016.1156556

Woodruff, E., Van Tongeren, D. R., McElroy, S., Davis, D. E., & Hook, J. N. (2014). Humility and religion: Benefits, difficulties, and a model of religious tolerance. In K.-P. Chu (Ed.), *Religion and Spirituality across Cultures* (pp. 271–285). New York, NY. doi:10.1007/978-94-017-8950-9_14

World Health Organization. (2014). *Preventing suicide: A global imperative*. Retrieved from http://apps.who.int/iris/bitstream/10665/131056/8/9789241564878_eng.pdf?ua=1

Worthington, E. L. (2001). *Five steps to forgiveness : the art and science of forgiving*. Crown.

Worthington, E. L. (2007). *Handbook of Forgiveness*. Routledge. doi:10.4324/9780203955673

Worthington, E. L., & Allison, S. T. (2018). Humility, mental health, and physical health. In E. L. Worthington, & S. T. Allison, *Heroic humility: What the science of humility can say to people raised on self-focus* (pp. 91–103). American Psychological Association. Washington, DC. doi:10.1037/0000079-006

Worthington, E. L., & Aten, J. D. (2009). Psychotherapy with religious and spiritual clients: An introduction. *Journal of Clinical Psychology*, *65*(2), 123-130. doi:10.1002/jclp.20561

Worthington, E. L., Davis, D. E., & Hook, J. N. (2017). *Handbook of humility: Theory, research, and applications* (E. L. Worthington, D. E. Davis, & J. N. Hook (Eds.). Routledge/Taylor & Francis Group. doi:10.4324/9781315660462

Worthington, E. L., Griffin, B. J., & Provencher, C. (2018). Forgiveness. In J. E. Maddux (Ed.), *Subjective well-being and life satisfaction* (pp. 148–167). New York, NY: Routledge.

Yen, S., Kuehn, K., Tezanos, K., Weinstock, L. M., Solomon, J., & Spirito, A. (2015). Perceived Family and Peer Invalidation as Predictors of Adolescent Suicidal Behaviors and Self-Mutilation. *Journal of Child and Adolescent Psychopharmacology*, *25*(2), 124–130. doi:10.1089/cap.2013.0132

Zaborskis, A., Ilionsky, G., Tesler, R., & Heinz, A. (2019). The association between cyberbullying, school bullying, and suicidality among adolescents: Findings from the cross-national study HBSC in Israel, Lithuania, and Luxembourg . *Crisis*, *40*(2), 100–114. doi:10.1027/0227-5910/a000536

Zapata Roblyer, M. I., & Betancourth Zambrano, S. (2020). Crime victimization and suicidal ideation among Colombian college students: The role of depressive symptoms, familism, and social support. *Journal of Interpersonal Violence*, *35*(5–6), 1367–1388. doi:10.1177/0886260517696856

Zimmerman, K., Smith, J., Simonson, K., & Myers, W. (2015). Familial relationship outcomes of coming out as an atheist. *Secularism and Nonreligion*, *4*(4), 1 – 13. doi:10.5334/snr.aw

Zhu, H. (2015). Social support and affect balance mediate the association between forgiveness and life satisfaction. *Social Indicators Research*, *124*(2), 671–681. doi:10.1007/s11205-014-0790-8

Zmigrod, L., Zmigrod, S., Rentfrow, P. J., & Robbins, T. W. (2019). The psychological roots of intellectual humility: The role of intelligence and cognitive flexibility. *Personality and*

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Publications:

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Hall, B. B, Webb, J. R., & Hirsch, J. K. (2020). Spirituality and suicidal behavior: The mediating role of self-forgiveness and psychache. *Psychology of Religion and Spirituality*, 12(1), 36–44. doi:10.1037/rel0000182

Webb, J. R., Bumgarner, D., Conway-Williams, E., Dangel, T. J., & Hall, B. B. (2017). A consensus definition of self-forgiveness: Implications for assessment and treatment. *Spirituality in Clinical Practice*, *4*(3), 216–227. doi:10.1037/scp0000138