The Effect of Religion on Emotional Well-Being among Offenders in Correctional Centers of South Africa: Explanations and Gender Differences

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Abstract

We examined (1) whether the relationship between religiosity and negative emotions (anger, frustration, depression, and anxiety) among prisoners is attributable to inmates' sense of meaning and purpose in life and personal virtues and (2) whether religiosity has a larger positive relationship with a search for and a presence of meaning in life as well as the virtues of forgiveness, gratitude, and self-control among female than male inmates. To examine these relationships, we analyzed survey data from a sample of offenders in South African correctional centers. Findings showed that more religious inmates reported lower levels of negative emotions to the extent that their religiosity enhanced a sense of meaning and purpose in life and levels of self-control than their less or non-religious peers. We also found the salutary effect of religiosity to be applicable equally to male and female inmates. Substantive and practical implications of our findings are discussed.

Keywords: Religion, meaning and purpose in life, virtue, mental health, prison

Imprisonment is strain that generates negative emotional states (Agnew, 1992). Moreover, prison is a "total institution" (Goffman, 1961) where the mortification of self along with a sense of guilt and hopelessness is likely to result in an inmate's loss of meaning and purpose in life as well as feelings of anger, frustration, depression, and anxiety. Negative emotions created by strain and the existential crisis common to prisoners contribute to mental health problems and infractions including violence and suicide (Agnew, 2006; Blevins, Listwan, Cullen, & Jonson, 2010), which have costly consequences, such as increased staffing needs, litigation, and recidivism (Tewksbury, Connor, & Denney, 2014; Torrey, Kennard, Eslinger, Lamb, & Pavle, 2010). It is important, therefore, to address negative emotions among prisoners as a preventive measure designed to enhance inmate health and well-being. Previous research indicates religion can help inmates cope with negative emotions (e.g., Clear & Sumter, 2002; Hallett, Hays, Johnson, Jang, & Duwe, 2017; Johnson, 2011), but why it is helpful has been rarely studied in criminology.

To fill this gap in research on religion in prison, we first examine whether the anticipated salutary effect of religion on emotional well-being among prison inmates is attributable to two potential outcomes of an inmate's religiosity or religious involvement: a sense of meaning and purpose in life and personal virtues. Specifically, we hypothesize that the relationship between religiosity and negative emotions is indirect via religion-based existential belief in life's meaning and purpose and religion-promoted virtuous characteristics, such as forgiveness, gratitude, and self-control. Regarding gender differences, we hypothesize that the effect of religiosity on a sense of meaning and purpose in life and personal virtues is stronger among female than male inmates based on prior research that tends to find the influence of religion to be larger among women than

men (e.g., Jang & Johnson, 2005). To test these hypotheses, we analyzed survey data from a sample of offenders in South African correctional centers.[1]

This paper begins with a contextual discussion of the role of religion in prison and then reviews previous studies on the salutary effect of religion on mental health, focusing on its explanations and gender differences. We then introduce our hypotheses, followed by a description of our sample, measurement, and analytic strategy. After presenting results to test the hypotheses, substantive and practical implications of our findings as well as suggestions for future research are discussed.

The Role of Religion in Prison

Imprisonment is strain primarily as the removal of positive stimuli and the presentation of noxious stimuli (Agnew, 1992), which Sykes (2007 [1958]) detailed in terms of five different "pains of imprisonment": (1) the loss of liberty, (2) the deprivation of goods and services, (3) the frustration of sexual desire, (4) the deprivation of autonomy, and (5) the deprivation of security. The pains of loss and deprivation are, of course, not simply physical as the very foundation of the prisoner's being, such as their sense of self-worth, is threatened. Upon entrance, prisoners are stripped of supports taken for granted in the outside world and their identity becomes mortified as a result of a series of degradations of self in the "total institution" (Goffman, 1961). The strain of mental pains generates negative emotions, such as anger and depression (Agnew, 2006). The mortification of self, along with a sense of guilt and shame, is also likely to throw prisoners into an

[1] We use the terms "offenders" and "correctional centers" (which is spelled centres in South Africa, though we use American English spelling in this paper) instead of "prisoners" and "prisons" when they are related to South Africa as required by the South Africa Department of Correctional Services (Department of Correctional Services, 2005), which approved data collection for the present study.

existential crisis in which they are confronted with the reality that their lives lack a sense of meaning and purpose. This existential identity crisis can be devastating for prisoners.

Inmates often try to cope with the strain of imprisonment, which has been the subject of research on inmate adjustment to prison (Adams, 1992). For example, inmates often adopt into their lives the folkways, mores, and customs of the prison, which Clemmer (1958) called "prisonization." Regardless of whether prison culture is primarily created by prisoners (i.e., the deprivation model) or brought with them from the outside (i.e., the importation model), the prison code generally operates in opposition to prison authority and institutional rules (Goodstein & Wright, 1989) and thus contributes to the deviant coping of infractions (i.e. institutional rule-breaking). Alternatively, researchers have focused on emotional aspects of prison adjustment, examining how prisoners' coping skills and perceptions of the prison environment affect emotional adjustment (Porporino & Zamble, 1984; Zamble & Porporino, 2013 [1988]). Their emotional coping skills, however, tend to be limited and often deviant, which may result in mental health problems, self-injuries, and suicide.

Religion is one of the few sources of prosocial coping available in prison. For example, religion may help prisoners deal with guilt and shame through forgiveness. It may also help them discover a new way of life by searching for and finding meaning in life. In addition, faith may help offenders address the loss of freedom via a personal sense of peace, or find social support in the networks of coreligionists inside and outside of prison (Clear, Hardyman, Stout, Lucken, & Dammer, 2000; O'Connor & Perreyclear, 2002). Religion can also facilitate inmate adjustment to prison by promoting personal virtues, which help prisoners restore themselves from moral failures. As prisoners become more virtuous through participation in religious activities, they come to have a different outlook not only on the future but also on the present reality of imprisonment, thereby

coping with the prison environment in a prosocial manner. The effect of religion via the promotion of personal virtues is well illustrated in "the virtuous prison" proposed by Cullen et al. (2014 [2001]).

Proposing this new model for prisons as an alternative to traditional prisons that focus on legal justice for prisoners, incapacitation, or retribution, Cullen et al. (2014 [2001]:74) argued the prison should "use offenders' time of incarceration to cultivate moral awareness and the capacity to act virtuously" for their "restorative rehabilitation." Specifically, they suggested, a virtuous milieu can be created by eliminating inmate idleness to have prisoners engage in activities that would have a restorative purpose (e.g., making wages to compensate victims with prisoners writing and sending the checks to victims or producing items for the needy, like toys for poor children) and encouraging them to have interactions with virtuous people, whether religious or not. While acknowledging that the virtuous prison is not intended for all inmates, Cullen et al. discussed how religion would make it possible to accomplish the mission of the virtuous prison, restorative rehabilitation, using an example of the faith-based prisons in Texas, that is, Prison Fellowship Ministries' InnerChange Freedom Initiative (see also Johnson, 2014).

In this study we examine the role of religion in helping prisoners emotionally adjust to prison by focusing on the effect of religion on mental health, specifically, emotional well-being among prison inmates.[2]

The Effect of Religion on Mental Health

The salutary effect of religiosity on mental health has been well documented in studies conducted by researchers of psychology, psychiatry, epidemiology, sociology, and medicine

[2] In this paper the terms "mental health" and "emotional well-being" are not used interchangeably as the former concept is broader in scope than the latter, which we focus on in our study described below.

(Koenig, King, & Carson, 2012). Hackney and Sanders' (2003) and Sawatzky et al.'s (2005) meta-analyses confirmed the positive relationship between religiosity and mental health across diverse definitions of the concepts. Moreira-Almeida et al.'s (2006) systematic review of 850 studies on religion and mental health concluded that religiosity is inversely related to depression and suicidality as well as being positively associated with emotional well-being. Levin's (2010) review of psychiatric and mental health research on religion drew much the same conclusion.

While limited in number and scope, prior research on religion and mental health among prisoners also shows the positive relationships between religiosity and emotional well-being (Eytan, 2011), though some studies failed to find the same (Drakeford, 2019; Kerley, Allison, & Graham, 2006). For example, analyzing survey data from a sample of 769 male inmates in 20 prisons in 12 states, Clear and Sumter (2002) found prisoners' religiousness was inversely related to various depressive symptoms. Similarly, Koenig (1995) reported a negative relationship between intrinsic religiosity and depression among older (age 50 or over) men in prison, whereas Aday et al.'s (2014) study of older female inmates revealed that religion helped them overcome feelings of guilt and hopelessness. More recently, Jang et al.'s (2018) analysis of survey data from a random sample of male inmates from three Texas prisons showed an inverse relationship between religiosity and state depression and anxiety. While previous studies on religion and mental health among prisoners were based mostly on a sample where religious inmates were predominantly Christian, Mandhoui et al.'s (2014) study based on a sample that was 50 percent Muslim was no different in finding the salutary effect of religiosity.

Scholars tend to attribute religiosity's salutary effect on mental health to prosocial outcomes of religious involvement. According to Smith (2003b), different religious traditions promote personal virtue, like self-control, forgiveness, and gratitude. Once internalized, these

virtues are reinforced in religious communities where social support and positive role models guide life choices (e.g., avoiding drug use and seeking reconciliation instead of vengeance). In this way, they reduce stressors and thus lessen distress. Religions also "promote a variety of beliefs and practices that can help believers cope with the stress of difficult situations …, to process difficult emotions, and to resolve interpersonal conflicts" (p. 23), thereby enhancing emotional well-being.

Prior research provides empirical evidence for the proposition that social support is a key mediator between stressors and psychological distress (Mirowsky & Ross, 2003) and partly explains the inverse relationship between religiosity and distress (e.g., Hayward & Krause, 2014; Jang & Johnson, 2004; Krause, Ingersoll-Dayton, Liang, & Sugisawa, 1999). Similarly, the salutary effect of religion on mental health is "virtuous effect" in that it is attributable to religion's promotion of virtues (Desmond, Soper, & Kraus, 2011; Emmons & Paloutzian, 2003; Krause, 2018; McCullough, 2000; Pirutinsky, 2014; Roberts, 2004; Rye et al., 2000), which contribute to emotional well-being (Emmons & Crumpler, 2000; Emmons & McCullough, 2003; Froh, Sefick, & Emmons, 2008; McCullough, 2000). For example, Randall and Bishop (2013) found the effect of religiosity on positive attitudes toward life (including hope) was indirect via forgiveness among older (ages 45 to 82) male prisoners, whereas Jang et al. (2018) found forgiveness and gratitude mediated the effects of religiosity on state depression and anxiety.

Besides the virtuous effect, religion is expected to have an "existential effect" on mental health via its contribution to a human's innate, existential need for meaning and purpose in life. While an individual could claim meaning in life based on anything, religion is a major source of self-transcendent meaning (Batson & Stocks, 2004; Fry, 2000; Martos, Thege, & Steger, 2010), which Frankl (1984 [1946]:133) argues is a key characteristic of the "true meaning of life."

Failure to meet this human need leads to "existential frustration" (Frankl, 1984 [1946]:123), negatively affecting mental health. Similarly, George, Ellison, and Larson (2002) suggest that the relationship between religious involvement and mental health can be partly explained by a sense of meaning or what Ellison (1991) calls "existential coherence." Also, McKnight and Kashdan (2009) propose that purpose, a self-organizing life aim, provides a sense of meaning as well as stimulating goals and managing behaviors, which in turn contributes to emotional well-being.

Prior research provides empirical evidence that religiosity is positively related to meaning and purpose in life, which in turn is positively associated with psychological well-being. For example, Steger and Frazier (2005) found that meaning in life mediated the relationship between religiousness and life satisfaction (see also Bernard et al., 2017). Similarly, Jang (2016) reported not only a positive relationships between religiosity and a belief in ultimate meaning and purpose in life, but also an inverse relationship between the existential belief and symptoms of anxiety-related disorders (see also Wang, Koenig, Ma, & Shohaib, 2016). Previous studies on prisoners report consistent findings. Vanhooren et al.'s (2017) study of inmates in three Belgium prisons found a positive relationship between the experience of loss of meaning and distress, whereas Jang et al. (2018) observed that an inmate's belief in meaning and purpose in life explained the relationship between religiosity and state depression and anxiety. Aday et al.'s (2014) exploratory qualitative study also revealed that religion helped older female inmates serving life sentences overcome feelings of hopelessness by having them construct coherent narratives of meaning in life.

The Present Study

Based on the literature reviewed above, we propose to examine whether the salutary effect of religiosity on emotional well-being among prisoners is in part existential and virtuous,

that is, attributable to a sense of meaning and purpose in life and virtues, which religion is expected to promote and enhance. An underlying assumption of this proposition is that prisoners as humans are existential beings in the sense that they have an innate need to live meaningful lives (Frankl, 1984 [1946]). As a result of the "hitting rock bottom" strain of imprisonment, prisoners come to face the reality that their lives lack meaning. If they fail to address the existential crisis, they are likely to have mental health problems. Another assumption is that prisoners are moral beings in that they are innately motivated to "act out and sustain moral order, which helps constitute, directs, and makes significant human life itself" (Smith, 2003a:8). In prison, they are confronted with the fact that their lives have been in violation of moral order and, as a result, experience negative emotions, which are signs of such violation.

To operationalize emotional well-being, we focus on negative emotional states of anger, frustration, depression, and anxiety: that is, the lower the levels of the negative emotional states, the better emotional well-being.

To measure the virtuous effect of religiosity, we examine three virtues: forgiveness, gratitude, and self-control. Forgiveness is expected to enhance emotional well-being because it helps prisoners not only repair relations damaged by their offenses, but also to reestablish their personal self-worth by forgiving themselves (Clear et al., 2000; Krause, 2018). Gratitude, a positive attitude toward undeserved benefits, is likely to increase emotional well-being among prisoners as they recognize and appreciate gifts in life, such as loving support from their family or a chance to start a new life (Emmons & McCullough, 2003; Froh et al., 2008).

Next, prior research tends to find religiosity to be positively associated with self-control, indicating that religion may foster this virtue (Desmond, Ulmer, & Bader, 2013; McCullough & Willoughby, 2009; Pirutinsky, 2014; Reisig, Wolfe, & Pratt, 2012; Welch, Tittle, & Grasmick,

2006).[3] In addition, according to Gottfredson and Hirschi (1990:90), "people with low self-control tend to have minimal tolerance for frustration," which leads them to lose temper easily and become angry (Grasmick, Tittle, Bursik, & Arneklev, 1993). Thus, self-control is expected to reduce the chance of reacting to strain with anger and frustration partly via the recruitment of cognitive control resources, such as forgiveness (Wilkowski, Robinson, & Troop-Gordon, 2010), and its relationship with conscientiousness (Jensen-Campbell, Knack, Waldrip, & Campbell, 2007). Self-control, particularly the component of diligence, tenacity, and persistence in the course of action and that of cognitive skills and long-term planning (Grasmick et al., 1993), are also likely to decrease depression and anxiety by increasing coping self-efficacy (i.e., belief in coping capabilities in stressful situations) (Bandura, 2010; Fuchs & Rehm, 1977).

Religious involvement is likely to encourage inmates to search for meaning and purpose in life and help them find one by establishing their goals in life, which serve as important sources of meaning (Emmons, 2005). Having a sense of meaning and purpose in life is expected to have a salutary effect on mental health as it addresses existential crisis and makes one likely to experience life as fulfilling, meaningful, and purposeful even in the face of a severe strain, like imprisonment (Cotton, Larkin, Hoopes, Cromer, & Rosenthal, 2005; Edwards & Holden, 2001; Emmons, 2005; Frankl, 1984 [1946]; Krause, 2018). On the other hand, searching but not

[3] The positive association's reverse causality (i.e., self-control affecting religiosity) has been proposed (Ellis, 1987), while previous studies providing empirical support for the proposition were based on cross-sectional data (Cochran, Wood, & Arneklev, 1994; Kerley, Copes, Tewksbury, & Dabney, 2011). However, testing for causal direction requires panel data, and one longitudinal study found religion to predict self-control but failed to find evidence for the reverse causality (Pirutinsky, 2014). More importantly, the question of causal direction is primarily a theoretical issue, and we believe religiosity is more likely to increase self-control than the other way around because there are more theoretical reasons for the former (Smith, 2003b) than the latter (Ellis, 1987).

finding meaning and purpose is unlikely to have the same prosocial effect and, in fact, could be detrimental to mental health. For example, one study found having a sense of meaning in life was inversely related to general anxiety disorder, but searching for meaning, while controlling for the presence of meaning, was *positively* related to the disorder (Jang, 2016). Thus, we conceptually distinguish between searching for and finding meaning and purpose in life given their anticipated differential effects on emotional well-being. In sum, we test the following hypothesis.

- **Hypothesis 1**. The relationship between religiosity and negative emotions is mediated by the variables of meaning and virtue: specifically, (a) religiosity is positively related both to a search for or a presence of meaning and purpose in life and the virtues of forgiveness, gratitude, and self-control, and (b) the presence of meaning and virtues is inversely related to negative emotional states (anger, frustration, depression, and anxiety), whereas the search for meaning is positively related to those negative emotional states.

In addition, we examine gender differences in the prosocial outcomes of religiosity, which in turn would enhance emotional well-being among prison inmates. This is an important consideration since prior research shows not only that women are more religious than men but also religion tends to have more influence among females than males (Jang & Johnson, 2005; Sherkat & Ellison, 1999). In a study of 3,358 prisoners (89.6% male and 10.4% female) during the first year of their incarceration in the Oregon prison system, O'Connor and Duncan (2011) found that the percentage of those who had attended religious service once a month or more in childhood were high for both men and women (68% and 70%) and, as expected, declined in adolescence (48% for both) and in the year prior to arrest (30% and 23%) but dramatically increased after arrest (54% and 66%). This pattern of religious attendance was more pronounced for the women than the men. Consistent with this finding, Lonczak et al.'s (2006) study of 305

inmates at a Washington state minimum security facility (80.3% male and 19.7% female) showed not only that female inmates reported higher levels of religious coping activities (Pargament et al., 1990) than their male counterparts but also that the effects of religious coping on state depression, anxiety, and hostility were greater among females than males.

While research on gender differences in the effect of religiosity on existential belief and personal virtues has rarely been conducted, one study reports mixed findings. Specifically, Furrow et al. (2004) found the effect of self-perceived religiousness on the virtues of empathy, personal responsibility, and helpfulness to others was larger among female than male adolescents, but the effect on a sense of meaning and purpose in life was not significantly different between the two sexes. Despite this mixed result, based on the general finding of gender differences in religious influence (Sherkat & Ellison, 1999),we hypothesize as follows:

- **Hypothesis 2**. Religiosity is likely to have stronger positive relationship with a search for and a presence of meaning and purpose in life and personal virtues among female than male prisoners.

This study addresses a neglected question in previous studies that found the salutary effect of religion on emotional well-being among prison inmates, namely, why does religion have this beneficial effect? This question is important because the positive association between inmate religiosity and emotional well-being is likely to be spurious if we cannot theoretically explain the effect (Johnson & Jang, 2010). Therefore, we not only replicate Jang et al.'s (2018) study that provided an initial answer to this question, but we improve on the study in three ways. First, we expanded the scope of study by including the negative emotional states of anger and frustration, which is relevant to violence in prison, as well as depression and anxiety in our model. Second, we examine gender differences in the salutary effect of religion on emotional

well-being among prison inmates, which has often been neglected in prior research on religion in prison. Finally, we explore the generalizability of Jang et al.'s (2018) model, tested based on the U.S. data, by analyzing data collected in South Africa. So, before describing our methodology, we discuss religion in South African correctional centers as the context of our study.

Religion in Correctional Centers of South Africa

According to the Pew Research Center (2019), South Africa is not one of the countries that have high or very high government restrictions on religion or exhibit social hostilities involving religion. Indeed, South Africa's constitution guarantees freedom of religion. Thus, religion is very much a public norm in that country, and the practice of religion in South Africa is quite diverse, though Christianity is the dominant religion. According to the 2001 South Africa Census (Statistics South Africa, 2004) and the Association of Religion Data Archives (2015), about 80 percent of the population were classified as belonging to a Christian religion of some kind with about 5 to 10 percent being adherents of Islam, Hinduism, African traditional religion, and other non-Christian religion, whereas about 10 to 15 percent had no religious affiliation.

The religious rights of South African inmates are dealt with in various legislative frameworks such as the Constitution of the Republic of South Africa, The White Paper on Corrections in South Africa (Department of Correctional Services, 2005), and the United Nations Standard Minimum Rules for the Treatment of Prisoners (the Nelson Mandela Rules) (United Nations Office on Drugs and Crime, 2015). Of particular significance is Section 14 of the Correctional Services Act (No. 111 of 1998) which states that (1) an inmate must be allowed freedom of conscience, religion, thought, belief and opinion, (2) any inmate may attend religious services and meetings held in the prison voluntarily and may have in his or her possession religious literature, (3) where practicable, places of worship must be provided at every prison for

inmates of all religious denominations and (4) no inmate may be compelled to attend religious services or meetings or to take part in religious practices.

In South Africa there is a dearth of research regarding religiosity in corrections. However, one study of such ilk was conducted by Du Preez (2008) with female offenders. The study centered around the spiritual care of imprisoned women and 469 questionnaires were completed. From this study it emerged that the Department of Correctional Services (DCS) made efforts to ensure that the religious and spiritual needs of the female offenders were met. The majority of the offenders indicated that it was possible for them to practice their religion freely in the correctional center. If the offenders indicated that they had difficulty in practicing their religion, the reasons for this response ranged from a lack of visits from people from their church or faith, a lack of spiritual literature, and remarks from female inmates who were non-believers.

As of March 31, 2019, the number of offenders incarcerated in South Africa was 162,875, the largest in Africa, and its incarceration rate (279 per 100,000 inhabitants) is one of the highest in Africa (Institute for Criminal Policy Research, 2019). According to statistics provided by the DCS, 87 percent of those inmates participated in spiritual care programs in 2017/18 and 82 percent benefited from spiritual care in 2016/17 (Department of Correctional Services, 2018). This high percentage of inmate participation is an indication of the need for religious and spiritual care services in corrections. The Spiritual Care Policy of the DCS outlines the spiritual care services and programs offered to inmates in partnership with various role-players (Mkhathini, 2016). Spiritual care programs are designed to address (1) healing, responsibility, self-insight, guilt, anger, acceptance, and dignity, (2) religious knowledge, discipleship, and mentoring, (3) lifestyle, ethical behavior, positive values, and respect for self and others and (4) restoration, concentrating on forgiveness, grace, reconciliation, victim-

offender dialogue, and offender accountability (Frantz, 2017). Inmates are diverse in terms of the crime(s) committed, length of sentence, age, race, and socioeconomic standing. It is therefore not surprising that there is also diversity in religious affiliation ranging from Christianity to African traditional religion, Islam, Buddhism, Hinduism, Judaism, and the Rastafarian faith/denomination (Mkhathini, 2016).

An inmate's religious needs are considered throughout the admission, incarceration and release from correctional center. Upon admission in a prison, the offender will undergo an initial risk assessment. Unless an offender specifically requests spiritual intervention, the religious needs of offenders will only be captured during the comprehensive risk assessment. The inmate will be assessed in terms of the following: the religious affiliation of the offender before incarceration; whether the offender wants to be involved in spiritual care programs and serves during incarceration; if the offender wants to have contact with his or her religious leader or faith community and the religious diet of the offender (Frantz, 2017). DCS also provides a pre-release program that commences at least ten weeks prior to the offender's placement on parole and lasts until two weeks before placement. The offender undergoes intensive treatment and participate in various programs. The spiritual care worker will conduct the pre-release program *Ukuphula Iketanga* (Breaking the Chains). The focus of the program is to assist the offender to prepare for re-entry into the community and build constructive relationships (Booyens, 2011; Frantz, 2017).

In sum, the religious context of South Africa is not dissimilar to that of the U.S. In fact, South Africa's correctional policy seems more supportive of inmate participation in religion compared to its American counterpart. More importantly, since the spiritual care programs are designed to address inmate's dignity and virtues as well as other needs, it is reasonable to expect religion to have existential and virtuous effects on their emotional well-being.

Methods

Sample

Data to test our hypotheses came from a self-administered survey we conducted at four correctional centers in South Africa in 2018: two (Modderbee Male and Johannesburg Female Correctional Centers) in Gauteng Province in March and two (Kroonstad Male and Kroonstad Female Correctional Centers) in Free State Province in July. We submitted our proposed research to the South Africa DCS in November 2017, and it was approved by the DCS Research Ethics Committee in March 2018. A convenience sample was drawn at each correctional center, and the final sample consisted of 425 offenders, 245 males in Modderbee and Kroonstad (134 and 111, respectively) and 180 females in Johannesburg and Kroonstad (146 and 34, respectively). Offenders who agreed to participate in our study signed a consent form and answered questions in the survey. Both the consent form and survey were prepared in Zulu (which is the most widely spoken home language in South Africa) as well as in English. After the survey was conducted, we obtained data on participating offenders' sociodemographic characteristics and justice system-related records from each correctional center.

Measurement

To measure *Negative emotions*, we used four items asking the offender how often he or she had felt angry, depressed, frustrated, and anxious during the last week prior to survey (1 = never, 2 = rarely, 3 = sometimes, 4 = often, 5 = very often). The items were loaded on a single factor with moderate-to-high factor loadings, ranging from .583 to .780 (see Appendix A), and had good inter-item reliability (Cronbach's $\alpha = .777$). So, they were averaged to combine.

A scale of *religiosity* was constructed by summing standardized scores of one item of public religiosity (religious service attendance) and four items of private religiosity (perceived

closeness to God, perceived importance of religion, praying outside of religious services, and reading a sacred text in private). The items were loaded on a single factor and had moderate-to-high factor loadings, ranging from .499 to .744, and good internal reliability (α = .728).

To measure a sense of meaning and purpose in life, we created a scale of *presence of meaning* by averaging scores on two items from Steger et al.'s (2006) Search and Presence of Meaning scale, which had an acceptable inter-item reliability (α = .648). We also created a scale of *search for meaning* using two items from the same scale. While the items' reliability was poor (α = .477), the scale was kept in our analysis so we could compare the two measures of meaning. The other mediators of virtue were also measured mostly using items of existing scales. Two items of *forgiveness* came from Krause et al.'s (2016) Landmark Spirituality and Health Survey (see Items 1 and 3 in Appendix A), while a third item was added (Item 2). These items, loaded on a single factor, had high loadings (from .630 to .666) and acceptable reliability (α = .648) and thus were combined by averaging them. We used a single item of *gratitude* from McCullough et al.'s (2002) scale (see Appendix A). To measure *self-control*, we reverse-coded four items of impulsivity, risk seeking, self-centeredness, and temper (see Items 1 to 4 in Appendix A) from Grasmick et al.'s (1993) low self-control scale. The items had moderate-to-high factor loadings with one exception (.339 of the impulsivity item) and acceptable reliability (α = .645).

Finally, we included the offender's sociodemographic characteristics as controls in our analyses. Official data provided information about *age* (in years), sex (0 = male, 1 = *female*), nationality (0 = not South African, 1 = *South African*), and marital status (a dummy variable of *married* with all others combined being the reference category).[4] The offender's religious

[4] Although the official data included other information, such as the inmate's criminal history and prison records, we could not use them because they were plagued by too many missing cases to be included in analysis.

affiliation (three dummy variables of *Protestant*, *Catholic*, *non-Christian religion* with "no religion" being the reference category) and *program participation* (whether the offender was participating at the time of survey or had participated in educational, job skill or trade training, and other programs) were obtained from the survey.

Analytic Strategy

We applied a manifest-variable structural equation modeling approach to analyze the data because it enabled us not only to directly test the statistical significance of our hypothesized mediation (Hypothesis 1) but also to conduct multigroup analysis to test gender differences (Hypothesis 2). For model estimation, we employed Mplus 8 (L. K. Muthén & Muthén, 2017) that incorporates Muthén's (1983) "general structural equation model" and full information maximum likelihood (FIML) estimation. Because variables were measured by ordered categorical (e.g., presence of meaning) and continuous variables (e.g., age), we used the method of MLR, which generates the "maximum likelihood parameter estimates with standard errors … that are robust to non-normality and non-independence of observations" (L. K. Muthén & Muthén, 2017:668). We employed FIML to treat missing data, which tends to produce unbiased estimates, like multiple imputations (Baraldi & Enders, 2010; Graham, 2009).

Since the model is saturated (i.e., fully identified with zero degree of freedom), no model fit index is reported. For statistical significance ($\alpha = .05$), we conducted one-tailed test for the relationships whose direction were hypothesized or *a priori* known, while using two-tailed test for other relationships.

Results

Table 1 shows the frequency and percentage distributions of nominal-level variables and the descriptive statistics of others, along with the number of observations for each variable. The

Table 1. Descriptive Statistics of Variables Used in Analysis (n = 425)

	n/frequency	Mean/%	S.D.	Minimum	Maximum
Age	337	35.065	9.766	18.000	70.000
Female	425	.424	.495	.000	1.000
Married	337	.148	.356	.000	1.000
South African	425	.678	.468	.000	1.000
Protestant	388	.729	.445	.000	1.000
Catholic	388	.095	.294	.000	1.000
Non-Christian religion	388	.147	.354	.000	1.000
Program participation	398	1.817	1.028	.000	3.000
Religiosity	399	-.003	.720	-2.574	.803
Search for meaning	416	6.060	1.234	1.000	7.000
Presence of meaning	413	5.820	1.440	1.000	7.000
Forgiveness	418	3.362	.691	1.000	4.000
Gratitude	394	5.726	1.540	1.000	7.000
Self-control	406	3.456	.927	1.000	5.000
Negative emotions	418	3.097	.975	1.000	5.000
Marital status					
Married	50	14.8%			
Divorced	5	1.5%			
Separated	3	.9%			
Marriage-like relationship	2	.6%			
Widowed	4	1.2%			
Single	273	81.0%			
Total	337	100.0%			
Religious affiliation					
Protestantism	283	72.9%			
Catholicism	37	9.5%			
Islam	16	4.1%			
Eastern religion	9	2.3%			
Native religion	4	1.0%			
Other religion	28	7.2%			
No religion	11	2.8%			
Total	388	100.0%			

survey respondents were, on average, about 35 years old with the youngest and the oldest being 18 and 70, respectively, 42.4 percent female, and 67.8 percent South African. A typical offender was found to have participated and/or be participating at the time of survey in almost two of three types of program (1.817). Eight out of ten (81.0%) offenders whose marital status was available in the official records were single or never married, whereas about 15 percent (14.8%) were married with the remainder being divorced (1.5%), separated (.9%), in a marriage-like relationship (.6%), or widowed (1.2%). Almost all (97.2%) offenders who answered the survey question about religious affiliation reported that they identified with a religion, specifically, with Christianity (82.4%, 72.9% Protestant and 9.5% Catholic), Islam (4.1%), Eastern religion (2.3%), and native religion, such as San religion and Zulu or Bantu mythology (1.0%). The percentage of having a Christian religion is consistent with other statistics, while that of having no religion (2.8%) was smaller than that found in the general population (5 to 10%) (Association of Religion Data Archives, 2015; Statistics South Africa, 2004).

Table 2 presents results from estimating our model (standardized coefficients and their standard error in parenthesis) where two variables of meaning and purpose in life and three measures of virtue are mediators between religiosity and negative emotions, controlling for the inmate's sociodemographic characteristics and program participation. First, as hypothesized (Hypothesis 1a), we found religiosity was positively related to search for (.111) and presence of meaning (.293) and the virtues of forgiveness (.236), gratitude (.204), and self-control (.190). That is, more religiously involved offenders (who felt close to God, perceived religion to be important to them, and practiced religion by attending religious services, praying, and reading a sacred text) were more likely not only to search for and find meaning and purpose in life but also

Table 2. Estimated Structural Equation Models of Negative Emotions among Prison Inmates in South Africa (n = 425)

	Search for meaning		Presence of meaning		Forgiveness		Gratitude		Self-Control		Negative emotions	
Variable	β	(S.E.)	β	(S.E.)	β	(S.E.)	β	(S.E.)	β	(S.E.)	β	(S.E.)
Age	-.126	(.067)	-.032	(.067)	.131*	(.054)	-.002	(.064)	.206*	(.060)	-.023	(.054)
Female	-.060	(.054)	.122*	(.054)	-.101	(.053)	.053	(.054)	-.149*	(.051)	.208*	(.048)
Married	.014	(.056)	-.021	(.049)	.007	(.045)	.038	(.053)	.007	(.047)	-.009	(.043)
South African	.043	(.051)	-.042	(.052)	.110*	(.055)	.126*	(.055)	.067	(.054)	.033	(.049)
Protestant	.057	(.121)	-.273*	(.111)	-.187*	(.078)	-.045	(.095)	-.123	(.156)	-.013	(.113)
Catholic	-.027	(.100)	-.235*	(.088)	-.206*	(.069)	-.124	(.088)	-.146	(.111)	-.021	(.088)
Non-Christian religion	.101	(.105)	-.258*	(.103)	-.274*	(.077)	-.037	(.086)	-.186	(.130)	-.036	(.097)
Program participation	.034	(.052)	.002	(.048)	-.027	(.049)	-.014	(.054)	-.106*	(.049)	-.051	(.045)
Religiosity	.111*	(.050)	.293*	(.054)	.236*	(.052)	.204*	(.057)	.190*	(.050)	.071	(.053)
Search for meaning											.205*	(.046)
Presence of meaning	.323*	(.058)									-.193*	(.051)
Forgiveness	.037	(.052)	.162*	(.056)							-.034	(.055)
Gratitude	.047	(.059)	.169*	(.058)	.105+	(.059)					.037	(.045)
Self-control	-.034	(.045)	-.022	(.051)	.091+	(.055)	.098+	(.053)			-.347*	(.045)
R^2	.043+	(.024)	.099*	(.031)	.103*	(.030)	.072*	(.027)	.105*	(.033)	.218*	(.036)
Indirect effect of religiosity via												
search for meaning											.023*	(.011)
presence of meaning											-.057*	(.018)
forgiveness											-.008	(.013)
gratitude											.008	(.010)
self-control											-.066*	(.020)

Note. Standardized estimates (β) are presented, and S.E. refers to standard error of estimate.
+ $p < .05$ (one-tailed test), * $p < .05$ (two-tailed test).

to be more forgiving, grateful, and self-controlled than their peers who are less or not at all involved in religion.

Next, we found three of the five mediators were related to negative emotions in the expected direction (Hypothesis 1b). Specifically, presence of meaning (–.193) and self-control (–.347) were inversely related to negative emotions, though forgiveness and gratitude were not. On the other hand, as hypothesized, search for meaning (.205), controlling for presence of meaning, was positively associated with negative emotions. The bottom panel shows the mediations via search for meaning (.023), presence of meaning (–.057), and self-control (–.066) were statistically significant. That is, religiosity was found to have salutary effect on emotional well-being among offenders by helping them have a sense of meaning and purpose in life and the virtue of self-control, which in turn were inversely related to negative emotions. On the other hand, inmates who searched for but had not yet found meaning in life, tended to report negative emotions. In sum, Hypothesis 1 received empirical support except for the non-significant mediation by forgiveness and gratitude.

While only a few coefficients associated with sociodemographic controls were found significant, some of them are noteworthy. First, age was positively related to two of the five mediators, forgiveness (.131) and self-control (.206), indicating that, all else being equal, older offenders tended to be more forgiving and self-controlled than their younger counterparts. Second, after taking the exogenous and mediating endogenous variables into account, the levels of negative emotions were still higher among females than males (.208), consistent with prior research (e.g., Mirowsky & Ross, 1995). Third, we found offenders who reported they had a religion, whether Protestant, Catholic, or non-Christian, to report lower, not higher, levels of

presence of meaning (–.273, –.235, and –.258) and forgiveness than those who had no religion (–.187, –.206, and –.274). Since these inverse relationships were found with religiosity held constant, this unexpected finding implies what was important for offenders' sense of meaning and purpose in life and forgiveness was their religious *involvement*, not religious affiliation, as they could have said that they had religion even when they were not religiously involved.[5] In addition, we found positive correlations not only between search for and presence of meaning (.323) and among personal virtues (.105, .091, and .098) but also between presence of meaning and two virtues, forgiveness (.162) and gratitude (.169), which indicates that offenders who had a sense of meaning and purpose in life were likely to have virtuous characteristics.

We conducted a supplemental analysis by keeping the four items of negative emotions separate in our model to examine any differences in the four emotions (see Supplemental Table 1). The analysis revealed that the relationships observed between the mediators and negative emotions tended to be equally applicable to the different types of emotions. That is, search for meaning, positively related to the composite measure of negative emotions with presence of meaning held constant (.205; see Table 2), was also positively associated with anger (.132), depression (.175), frustration (.134), and anxiety (.190). In the same way, presence of meaning and self-control were found to be inversely related to each negative emotional state with one exception being non-significant relationship between presence of meaning and frustration (–.081, $p > .05$). The same pattern was also observed for mediation: that is, indirect effects of religiosity via search for and presence of meaning and self-control were found for all types of negative emotions except for the effect via presence of meaning on frustration (–.024, $p > .05$).

[5] This is plausible given that an unusually high percentage (97.2%) of the survey participants said they had religion.

To further explore the nature of the religious effect, we also estimated the model by using separate measures of public (religious service attendance) and private religiosity (perceived closeness to God, perceived importance of religion, praying outside of religious services, and reading a sacred text in private) [6] instead of their combined measure. Private religiosity was found to have a significant effect on the presence of meaning (.225), forgiveness (.165), gratitude (.192), and self-control (.142) and significant mediation via presence of meaning (–.044) and self-control (–.049), consistent with what was found earlier except for search for meaning, whereas public religiosity was related only to forgiveness (.123) and had no significant mediation (see Supplemental Table 2). The same pattern was observed in the model that replaced the omnibus measure of negative emotional states with anger, frustration, depression, and anxiety (see Supplemental Table 3). In sum, private religiosity was more likely to have existential and virtuous effects and mediate the effect of religiosity on emotional well-being than public religiosity.

This finding may suggest that the items of subjective religiosity (perceived closeness to God and importance of religion) and private practice (prayer and reading a sacred text) had more construct validity than the item of religious service attendance, at least, among offenders at the four correctional centers in South Africa. Another possibility is that offenders whose religiosity had an intrinsic orientation (Allport & Ross, 1967) were likely to have prayed and read a sacred text outside of religious services as well as feeling close to God and believing the importance of religion, whereas non-religious offenders and those with extrinsic religiosity could have attended religious services for instrumental, utilitarian purposes rather than religion *per se* (e.g., safety,

[6] The four items of private religiosity were also loaded on a single factor and had high loadings (ranging from .598 to .723) and good inter-item reliability ($\alpha = .736$).

material comforts including food, or access to outsiders) (Aday et al., 2014; Clear et al., 2000; Dammer, 2002; Hallett et al., 2017; Maruna et al., 2006). This speculation seems plausible in that most survey participants reported religious affiliation.

Now we turn to results from the multigroup analysis to examine gender differences, presented in Table 3. We found both similar and dissimilar patterns between males and females. For example, religiosity was positively related to all five mediators in both samples with one exception that the expected relationship between religiosity and search for meaning was not found in the female sample (.090, $p > .05$). On the other hand, although search for (.184) and presence of meaning (–.194) and self-control (–.367) were related to negative emotions in the expected direction among male inmates as we found in the total sample (.205, –.193, and –.347, respectively; see Table 2), forgiveness (–.183) and gratitude (.143) were significantly related to the dependent variable among female inmates, but not among male inmates, while one of them had a relationship that was in the direction opposite to what was hypothesized (i.e., gratitude).

Consistent with these findings, the salutary effects of religiosity mediated by search for meaning and self-control were found in both male (–.045 and –.083) and female samples (–.066 and –.066), while the indirect effect via search for meaning that was significant in the total sample (.023; see Table 2) was not in either male (.025) or female sample (.020). In addition, although religiosity's indirect relationships with negative emotions via forgiveness and gratitude were not significant in the male sample (.017 and –.005, both $p > .05$) as we found in the total sample (–.008 and .008, both $p > .05$; see Table 2), the indirect relationships were significant in

Table 3. Estimated Structural Equation Models of Negative Emotions among Male and Female Prison Inmates in South Africa

	Search for meaning		Presence of meaning		Forgiveness		Gratitude		Self-Control		Negative emotions	
Variable	β	(S.E.)	β	(S.E.)	β	(S.E.)	β	(S.E.)	β	(S.E.)	β	(S.E.)
Male sample (n = 245)												
Age	-.120	(.085)	-.173	(.091)	.019	(.068)	.013	(.088)	.204*	(.085)	-.050	(.072)
Married	.019	(.072)	.010	(.070)	.040	(.048)	.003	(.055)	-.042	(.059)	.035	(.060)
South African	.055	(.066)	-.048	(.064)	.115	(.064)	.162*	(.064)	.104	(.065)	.085	(.065)
Protestant	.103	(.195)	-.297*	(.117)	-.118	(.093)	.064	(.127)	.054	(.157)	.144	(.152)
Catholic	.012	(.140)	-.222*	(.090)	-.208*	(.084)	-.162	(.129)	-.061	(.108)	.087	(.123)
Non-Christian religion	.070	(.178)	-.339*	(.118)	-.240*	(.099)	-.003	(.120)	-.072	(.145)	.116	(.138)
Program participation	.027	(.069)	.033	(.064)	-.006	(.062)	-.006	(.068)	-.092	(.061)	-.050	(.064)
Religiosity	.134+	(.077)	.234*	(.069)	.230*	(.068)	.151*	(.073)	.227*	(.072)	.154*	(.065)
Search for meaning											.184*	(.070)
Presence of meaning	.357*	(.071)									-.194*	(.072)
Forgiveness	.072	(.074)	.136+	(.073)							.072	(.077)
Gratitude	.136	(.080)	.232*	(.075)	.092	(.065)					-.033	(.066)
Self-control	-.098	(.060)	-.024	(.067)	.152*	(.066)	.016	(.067)			-.367*	(.059)
R^2	.034	(.033)	.088*	(.040)	.101*	(.040)	.088+	(.046)	.140*	(.052)	.192*	(.049)
Indirect effect of religiosity via												
search for meaning											.025	(.016)
presence of meaning											-.045*	(.021)
forgiveness											.017	(.019)
gratitude											-.005	(.010)
Self-control											-.083*	(.031)
Female sample (n = 180)												
Age	-.145	(.099)	.150*	(.070)	.240*	(.077)	.044	(.076)	.215*	(.080)	.035	(.081)
Married	-.003	(.084)	-.067	(.072)	-.034	(.071)	.052	(.085)	.043	(.072)	-.053	(.060)
South African	.039	(.070)	-.041	(.069)	.078	(.094)	-.001	(.076)	.008	(.073)	-.044	(.064)
Protestant	.023	(.140)	-.297	(.159)	-.297*	(.138)	-.206	(.122)	-.343	(.256)	-.128	(.134)
Catholic	-.030	(.141)	-.281	(.152)	-.249*	(.123)	-.164	(.114)	-.331	(.204)	-.119	(.116)

	Search for meaning		Presence of meaning		Forgiveness		Gratitude		Self-Control		Negative emotions	
Variable	β	(S.E.)	β	(S.E.)	β	(S.E.)	β	(S.E.)	β	(S.E.)	β	(S.E.)
Non-Christian religion	.202*	(.101)	-.218	(.136)	-.329*	(.129)	-.028	(.093)	-.260	(.188)	-.161	(.120)
Program participation	.063	(.081)	-.064	(.076)	-.047	(.079)	.018	(.092)	-.098	(.083)	-.055	(.061)
Religiosity	.090	(.069)	.422*	(.088)	.256*	(.081)	.281*	(.085)	.162*	(.073)	-.025	(.081)
Search for meaning											.226*	(.064)
Presence of meaning	.295*	(.088)									-.157*	(.067)
Forgiveness	-.011	(.061)	.176*	(.087)							-.183*	(.075)
Gratitude	-.081	(.077)	.062	(.090)	.102	(.104)					.143*	(.060)
Self-control	.034	(.071)	.016	(.074)	.004	(.095)	.197	(.079)			-.405*	(.069)
R^2	.060+	(.030)	.176*	(.063)	.133*	(.048)	.082*	(.047)	.080*	(.040)	.271*	(.055)
Indirect effect of religiosity via												
search for meaning											.020	(.017)
presence of meaning											-.066*	(.033)
forgiveness											-.047+	(.024)
gratitude											.040*	(.020)
Self-control											-.066*	(.033)

Note. Standardized estimates (β) are presented, and S.E. refers to standard error of estimate.
+ $p < .05$ (one-tailed test), * $p < .05$ (two-tailed test).

the female sample (–.047 and .040) with the mediation by gratitude being in the opposite direction due to the unexpected relationship between gratitude and negative emotions (.143).[7]

Finally, to test Hypothesis 2, we examined whether the relationship between religiosity and the five mediators significantly differed between male and female offenders, using equality constraint imposed on the same parameter estimate (i.e., unstandardized coefficient), which increases the degrees of freedom by one. Specifically, we tested whether the constraint resulted in a significant increase in chi-square (i.e., 3.841 or larger). For this chi-square difference ($\Delta\chi^2$) test, we used Satorra-Bentler scaled chi-square because the model was estimated using the method of MLR instead of ML. A significant change in chi-square would indicate gender differences. Results are presented in Table 4.

The table presents unstandardized coefficients and their standard error (in parenthesis), showing the relationship between religiosity and the mediators separately for males and females. For example, the initial multigroup analysis (i.e., without equality constraint) estimated the relationship between religiosity and search for meaning to be .232 (S.E. = .140) in the male

[7] An additional analysis, where we kept the four negative emotional states separate in the model, revealed that the unexpected relationship applied only to anxiety (see Supplemental Table 4), though it is difficult to explain why being grateful was positively associated with anxiety among female inmates. However, the overall results showed gender similarities more than gender dissimilarities. Furthermore, when we estimated the public vs. private religiosity model separately for males and females, private religiosity was still more likely to have existential and virtuous effects and significant mediation than public religiosity, whether we used the omnibus or separate measures of negative emotional states (see Supplemental Tables 5 and 6). We also found no significant interactions involving public and private religiosity in the total sample (see Supplemental Tables 7 and 8), whereas a few exceptions were observed in the gender subsamples (see Supplemental Tables 9 and 10).

Table 4. Unstandardized Coefficients Before and After Imposing Equality Constraint on the Effect of Religiosity on Mediators: Multi-group Analysis

	Search for meaning		Presence of meaning		Forgiveness		Gratitude		Self-control	
	Before	After	Before	After	Before	After	Before	After	Before	After
Male	.232+	.193*	.518*	.628*	.235*	.230*	.344*	.440*	.314*	.254*
(n = 245)	(.140)	(.093)	(.162)	(.113)	(.071)	(.049)	(.168)	(.118)	(.102)	(.071)
Female	.150	.193*	.705*	.628*	.226*	.230*	.543*	.440*	.189*	.254*
(n = 180)	(.118)	(.093)	(.155)	(.113)	(.069)	(.049)	(.160)	(.118)	(.090)	(.071)
$\Delta\chi^2$ [a]		.190		.875		.008		.741		.855

Note. Unstandardized coefficients and their standard error (in parenthesis) are presented.
a Satorra-Bentler scaled chi-square test was used.
+ $p < .05$ (one-tailed test), * $p < .05$ (two-tailed test).

sample and .150 (S.E. = 118) in the female sample, whereas, with the equality constraint, the relationship was .193 (S.E. = .093) for both males and females. More importantly, the chi-square difference ($\Delta\chi^2$) test showed an increase in chi-square by .190 after the equality constraint, which indicated no significant gender difference in the relationship. The same was found for the other relationships. That is, we found relationships between religiosity and presence of meaning and the three virtues were not significantly different between male and female offenders.

In sum, we found no support for Hypothesis 2. That is, while the gender-specific relationships estimated in the initial multigroup analysis looked different with some of them being larger in the female than male samples (presence of meaning and gratitude) and some being the other way around (search for meaning and self-control) or similar between the two samples (forgiveness), none of them turned out to be statistically significant. In conclusion, we found religiosity had similar, existential and virtuous effects on emotional well-being among male and female offenders in South Africa.

Discussion

Micro-criminological research on religion applies theories of deterrence, control, social learning, and strain to explain the empirically established, inverse relationship between individual religiosity and crime (Johnson & Jang, 2010). Among those theories, Agnew's (1992) general strain theory seems particularly relevant to examine the role of religion in prison. First, the theory provides a framework for explaining inmate adjustment, that is, coping with the strain of imprisonment that generates negative emotional states, which in turn lead prisoners to engage in deviant coping (Blevins et al., 2010), whether self-directed (e.g., suicide) or other-directed (e.g., violence). Second, prisoners tend to lack prosocial coping skills, and religion is one of the few sources of help readily available and accessible in prison. To examine how religion helps

prisoners with emotional adjustment, that is, coping with negative emotions, we tested whether prisoners' religiosity is inversely related to their negative emotional state because of religion-based sense of meaning and purpose in life and religion-promoted virtues. We also examined whether religion's existential and virtuous effects are larger among female than male inmates.

As hypothesized, we found prisoners' religiosity was positively related to a search for and a presence of meaning and purpose in life and virtuous characteristics, which in turn were associated with the prisoners' negative emotional states in the expected direction. Specifically, more religious prisoners were more likely to have a sense of meaning and purpose in life and be forgiving, grateful, and self-controlled and thus less likely to have felt angry, frustrated, depressed, and anxious during the week prior to completing our survey than their less or non-religious peers. We also found that prisoners who were searching for meaning and purpose in life but had yet to find it, were more likely to report the negative emotional states compared to those who report having a sense of meaning and purpose in life (Frankl, 1984 [1946]; Jang, 2016).

In sum, we offer an explanation as to *why* religion tends to have a salutary effect on emotional well-being among prisoners, by not only replicating a related study (Jang et al., 2018) but also going beyond that study in three ways. First, as expected, we found an inmate's religiosity was inversely related to other-directed (anger and frustration) as well as self-directed negative emotional states (depression and anxiety) via the inmate's sense of meaning and purpose in life and virtuous characteristics. Second, we found religion's salutary effect on emotional well-being to be not significantly different between male and female prisoners, though we anticipated the effect to be larger among females than males. Given the limited research on gender differences in religion among prisoners, we cannot make any conclusive statement based on our study but speculate that men became more religious in prison than women, which would

level gender differences consistently observed in the general population (Sherkat & Ellison, 1999). Third, while criminological research on religion has been conducted using data from Western countries, mostly the United States, we examined religious influence on prisoners based on data from a non-Western country, South Africa. Consistency in findings between our study and Jang et al.'s (2018), which analyzed data collected in the U.S., indicates that the salutary effect of religion on emotional well-being among prisoners may be cross-culturally applicable. For conclusive evidence of generalizability, however, we recognize the need for more research based on non-Western data.

Putting our findings in a larger context, first, we believe this study advances the subfield "criminology of religion" (Cullen, 2010) by examining concepts criminological researchers have rarely considered in their study of religion (i.e., a sense of meaning and purpose in life and personal virtues) as Johnson and Jang (2010) suggested as one of future directions for criminological research on religion. We found evidence that religion yields more effects than previous researchers suspected regarding the applicability of criminological theories to explain the religiosity-crime relationship (e.g., control or prosocial learning effect religion).

Second, finding religion's existential and virtuous effects on prisoners' emotional well-being implies a need to broaden how scholars view prisoners and, more broadly, think of criminal offenders as human. There are two main conceptions of what it means to be human used in contemporary criminology. One is based on a utilitarian view where an individual commits crime because the perceived gain is greater than the loss feared, whereas the other is based on a deterministic view that suggests an individual commits crime primarily as a result of being exposed to pro-criminal over anti-criminal learning, pressured by strain, or through reacting to a stigmatizing label. The former view characterizes human as rational beings, whereas the latter

highlights humans as being subject to external forces. Alternatively, in this study we presuppose humans as existential and moral beings (Frankl, 1984 [1946]; Smith, 2003a) and mental health problems as an outcome of existential crisis and moral failure or lack of virtuous characteristics (Cullen et al., 2014 [2001]). Our findings indicate a potential utility of the alternative conception of what it means to be human, as we found religion helped prisoners cultivate a sense of meaning and purpose in life and develop virtues, which tend to reduce their negative emotions that otherwise might have led to deviant acts in prison.

Our conception of humans as existential and moral beings is consistent with the notion of human agency, which the emerging field of criminal desistance also emphasizes. Agency is the capacity of humans to make independent choices and to act with their own volition, while engaging with structural constraints. Scholars of criminal desistance focus on how offenders and prisoners as human agents choose to change by adopting a new identity based on self-reflection and evaluation of their past as they find their criminal lifestyle is unsustainable (Giordano, Cernkovich, & Rudolph, 2002; Paternoster & Bushway, 2009). The unsustainability arises from having a criminal identity that lacks meaning and thus is an obstacle to addressing their existential crisis. The antisocial identity is also incompatible with their innate need to restore the self from moral failure to a moral being capable of acting virtuously. Religion may help offenders address both needs by offering a new identity for transformation so they can choose to live a meaningful and virtuous life (Jang & Johnson, 2017; Maruna et al., 2006).

Yet the new identity that religion offers is only transformative if it reaches deeper than self-identification. Our study indicates that there is a gap between those who simply report a religious affiliation and those who practice that religion through frequent service attendance, prayer, and other practices. Religious *involvement* makes a difference for forming prosocial

identities, rather than simply religious affiliation (Hallett et al., 2017). Insofar as religion plays a role in individuals' search for meaning and purpose, it allows them to exercise their agency in an arena that is fundamental to their identity—and to do so in response to an existential crisis that has been in part initiated by the mortification process prison enacts. If identity is transformed in part through intentional self-change, heightened religious involvement in prison solidifies and buttresses those intentions to change by providing meaning and direction to them, even when other opportunities for cultivating agency have been removed (Paternoster & Bushway, 2009).

A practical implication of the present finding is that religion and faith-based programs in prison are likely to help prisoners cope with negative emotions they experience as a result of the strain of imprisonment, which otherwise may lead them to engage in deviance in prison. Specifically, we found religion was likely to help prisoners find new meaning and purpose in life and develop virtuous characteristics, which were likely to reduce feelings of anger, frustration, depression, and anxiety. The present study also revealed that prisoners simply reporting a religious affiliation without experiencing a close relationship with a transcendent, believing in the importance of religion, and practicing religion via frequent service attendance, prayer, and reading a sacred text, are unlikely to reap the mental health benefit of religion that religiously involved inmates may experience. Prisoners who found meaning and purpose in life and work on themselves for virtuous living are expected to be self-motivated for change and thus succeed in rehabilitation.

Despite these potential benefits to prisoners, religious programs should clearly remain voluntary for prisoners regardless of their rehabilitative efficacy. Coercive religious programs would not only be unconstitutional in the United States and South Africa but also compromise the intentionality and voluntariness essential for transforming an identity. Indeed, such programs

would likely undermine religion's effectiveness for those willing participants and fail to be effective (or even counterproductive) for those who are unwillingly coerced, as the obvious voluntariness of the practice may be essential for its salutary effects. Conversely, restricting inmates' voluntary participation in religious programs would seem to be shortsighted.

A key methodological limitation of this study is its use of cross-sectional data in studying causal relationships. Specifically, causal ordering between religiosity and the mediators was only partly established as the former was operationalized by three *previous* measures (frequency of service attendance, prayer, and reading the sacred text) and two *current* ones (perceived closeness to God and importance of religion) and the latter by all *current* measures (i.e., levels of existential belief and virtuous characteristics at the time of our survey). Furthermore, causal ordering between the mediators (*current* measures) and negative emotional states (*previous* measures) failed to meet the necessary condition of temporal order for causality, while their relationships can be viewed as contemporaneous (i.e., both mediators and negative emotions tapping the same period of one week prior to our survey).[8] Future research should examine these

[8] Following an anonymous reviewer's suggestion, we explored whether the relationships between religiosity and negative emotional states were spurious due to a third variable, self-control. Zero-order correlation between religiosity and negative emotional states was significant in the female sample ($r = -.135$) but not in the total ($r = -.038$) and male samples ($r = .044$). Partial correlation, controlling for self-control, was found not significant in the female ($r = -.106$) as well as total sample ($r = .053$) and significant but positive in the male sample ($r = .209$). First, the correlation becoming non-significant when self-control was held constant in the female sample implies its spuriousness as well as indirect relationship between religiosity and negative emotions via self-control. While we examined the indirect relationship where religiosity affects self-control (see footnote 3), the spuriousness suggests the obverse (Cochran et al., 1994; Ellis, 1987). Thus, the relationship between religiosity and self-control is likely to be reciprocal although we could not examine it as such due to our analysis of cross-sectional data. Second, the non-

relationships using panel data. Another limitation concerns generalizability of our findings since we studied a convenience sample of prisoners. Finally, while we were able to control for sociodemographic characteristics of prisoners, criminal backgrounds and prison-related records could not be held constant in data analysis because official data contained too many missing cases. This shortcoming needs to be kept in mind when the results are interpreted.

In conclusion, this study shows that religion tends to have a salutary effect on emotional well-being among prisoners as their religious involvement is likely to help them find meaning and purpose in life and develop personal virtues, thereby reducing their negative emotional states. The present study also implies that prisoners are essentially moral beings (Smith, 2003a) and thus need to be encouraged to develop virtuous character in pursuit of rehabilitation. Therefore, as Cullen et al. (2014 [2001]:65) argue, prisons should be considered as "moral institutions" that foster virtue in inmates, while holding them accountable "to become virtuous people and to manifest moral goodness." Religion, faith-based programs, and faith-motivated volunteers are ubiquitous and may well play an important role in helping prisons to move closer in the pursuit of a moral institution.

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significant zero-order correlation between religiosity and negative emotional states in the total and male samples revealed that whether religion enhanced emotional well-being or not depended on the extent to which inmates' religious involvement and practice provided them with a sense of meaning and purpose in life and promoted their personal virtues as our multivariate analysis showed rather than whether they simply had religious affiliation or even engaged in religious activities and practices, felt close to God, and believed religion to be important to them.

Acknowledgement

The authors are grateful to the editor and three anonymous reviewers for helpful comments on earlier drafts of the paper. They are also greatly indebted to the South Africa Department of Correctional Services and the following individuals including volunteers (listed in no order) for data collection: Dr. Menzi Mkhathini, Chaplain Fortein, Chaplain Rev. Oscar Madlala, Chaplain Rev. Nkuna, Chaplain Mamiki, Mrs. Mohapi, Ms. Dee Lombard, Ms. Porsha Moore, Ms. Cornelia (Connie) Wehrmann, Mr. Bryan Kraynauw, Rev. Andrew Walker, and correctional staff members and officers whose name could not be all mentioned here. Funding for this research was supported, in part, by Prison Fellowship International (PFI). Opinions expressed in this publication are those of the authors and do not necessarily reflect the views of PFI.

Disclosure Statement

No potential conflict of interest was reported by the authors.

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Appendix A. Variables Used for Analysis

Variable	Items (Response Categories)	Factor Loading (α)
Negative emotions	During the past week, how often have you experienced each of the following?	
	(1 = never, 2 = rarely, 3 = sometimes, 4 = often, 5 = very often)	(.777)
	1. felt angry	.613
	2. felt depressed or sad	.767
	3. felt frustrated	.780
	4. felt nervous, anxious, and on edge	.583
Religiosity		(.728)
	How close do you feel to God most of time? (1 = not close at all, 2 = not very close, 3 = somewhat close, 4 = pretty close, 5 = extremely close)	.608
	How often do you currently attend religious services at a place of worship? 1 = never, 2 = less than once a year, 3 = once or twice a year, 4 = several times a year, 5 = once a month, 6 = 2-3 times a month, 7 = about weekly, 8 = several times a week)	.499
	About how often do you currently pray outside of religious services? (1 = never, 2 = only on certain occasions, 3 = once a week or less, 4 = a few times a week, 5 = once a day, 6 = several times a day)	.718
	In general, how important is religion to you? (1= not at all, 2 = somewhat, 3 = fairly, 4 = very, 5 = extremely)	.584
	Outside of attending religious services, about how often do you currently spend private time reading the Bible, Koran, Torah, or other sacred book? (1 = never, 2 = less than once a year, 3 = one to several times a year, 4 = once a month, 5 = 2-3 times a month, 6 = about weekly, 7 = several times a week, 8 = everyday)	.744
	How true or untrue is each of the following statements? (1 = absolutely untrue, 2 = mostly untrue, 3 = somewhat untrue, 4 = can't say true or false, 5 = somewhat true, 6 = mostly true, 7 = absolutely true)	
Search for meaning	1. I am seeking a purpose or mission for my life.	(.477)
	2. I am always looking for something that makes my life feel important.	
Presence of meaning	1. I have a good sense of what makes my life meaningful.	(.648)
	2. I have found a satisfying reason why I was born.	
Forgiveness	Please indicate how often you have done each of the following. (1 = never, 2 = seldom, 3 = sometimes, 4 = often)	(.682)
	1. To forgive myself for things I have done wrong.	.630
	2. To ask for forgiveness from those whom I have hurt.	.643
	3. To forgive those who hurt me.	.666
Gratitude	Please indicate how much you agree with the following statement. (1 = strongly disagree, 2 = disagree, 3 = slightly disagree, 4 = neutral, 5 = slightly agree, 6 = agree, 7 = strongly agree)	
	If I had to list everything that I felt thankful for, it would be a very short list.*	
Self-control	How often would you say you do each of the following? (1 = never, 2 = rarely, 3 = sometimes, 4 = often, 5 = always)	(.645)
	1. Act on the spur of the moment without stopping to think*	.339
	2. Test myself by doing something a little risky*	.604
	3. Try to get what I want even if it causes problems for others*	.776
	4. Lost my temper*	.519

* Reverse-coded item

Supplemental Table 1. Estimated Structural Equation Models of State Anger, Depression, Frustration, and Anxiety among Prison Inmates in South Africa (n = 425)

Variable	Search for meaning	Presence of meaning	Forgiveness	Gratitude	Self-Control	Anger	Depression	Frustration	Anxiety
Age	-.127	-.029	.133*	-.017	.197*	-.112	-.005	.086	-.010
Female	-.060	.122*	-.102	.054	-.149*	.166*	.129*	.141*	.238*
Married	.014	-.022	.007	.042	.010	.009	.025	-.023	-.062
South African	.041	-.044	.111*	.130*	.068	.010	.093	.023	-.027
Protestant	.051	-.284*	-.190*	-.039	-.117	.193	.023	-.046	-.228
Catholic	-.031	-.243*	-.206*	-.119	-.140	.096	-.009	-.046	-.126
Non-Christian religion	.096	-.269*	-.278*	-.035	-.183	.214*	-.018	-.080	-.195
Program participation	.035	.001	-.030	-.015	-.107*	-.007	-.088	-.086	.033
Religiosity	.114*	.294*	.234*	.205*	.188*	.049	.037	.042	.130*
Search for meaning						.132*	.175*	.134*	.190*
Presence of meaning	.323*					-.160*	-.232*	-.081	-.121+
Forgiveness	.037	.158*				-.042	-.022	-.010	-.070
Gratitude	.047	.169*	.106+			.050	.047	-.022	.051
Self-Control	-.037	-.024	.094+	.099+		-.317*	-.198*	-.308*	-.286*
Anger									
Depression						.411			
Frustration						.399	.557*		
Anxiety						.368	.348*	.348*	
R^2	.043+	.100*	.104*	.072*	.102*	.195*	.129*	.139*	.191*
Indirect effect of religiosity via									
search for meaning						.015+	.020+	.015+	.022*
presence of meaning						-.047*	-.068*	-.024	-.036+
forgiveness						-.010	-.005	-.002	-.016
gratitude						.010	.010	-.004	.010
self-control						-.060*	-.037*	-.058*	-.054*

Note. Standardized estimates (β) are presented.
+ $p < .05$ (one-tailed test), * $p < .05$ (two-tailed test).

Supplemental Table 2. Estimated Structural Equation Models of Negative Emotions among Prison Inmates in South Africa (n = 425)

	Search for meaning		Presence of meaning		Forgiveness		Gratitude		Self-Control		Negative emotions	
Variable	β	(S.E.)	β	(S.E.)	β	(S.E.)	β	(S.E.)	β	(S.E.)	β	(S.E.)
Age	-.109	(.068)	-.024	(.071)	.134*	(.055)	-.018	(.066)	.221*	(.058)	-.026	(.056)
Female	-.058	(.054)	.121*	(.053)	-.094	(.053)	.055	(.054)	-.146*	(.051)	.206*	(.048)
Married	.025	(.056)	-.008	(.053)	.010	(.050)	.039	(.065)	.012	(.053)	-.012	(.046)
South African	.036	(.050)	-.047	(.052)	.118*	(.056)	.132*	(.055)	.076	(.054)	.031	(.049)
Protestant	.073	(.119)	-.269*	(.111)	-.186*	(.078)	-.041	(.098)	-.128	(.154)	-.027	(.112)
Catholic	-.019	(.100)	-.234*	(.088)	-.206*	(.068)	-.120	(.089)	-.152	(.110)	-.030	(.088)
Non-Christian religion	.112	(.103)	-.257*	(.103)	-.276*	(.075)	-.036	(.087)	-.194	(.128)	-.047	(.097)
Program participation	.033	(.052)	.004	(.049)	-.032	(.049)	-.011	(.054)	-.110*	(.049)	-.050	(.045)
Public religiosity	.081	(.057)	.096	(.064)	.123*	(.057)	.020	(.059)	.084	(.054)	-.004	(.051)
Private religiosity	.038	(.052)	.225*	(.059)	.165*	(.056)	.192*	(.072)	.142*	(.054)	.085	(.052)
Search for meaning											.207*	(.046)
Presence of meaning	.327*	(.058)									-.194*	(.051)
Forgiveness	.037	(.053)	.162*	(.056)							-.034	(.0550
Gratitude	.051	(.060)	.173*	(.059)	.110+	(.059)					.037	(.045)
Self-control	-.032	(.045)	-.021	(.051)	.088	(.056)	.102+	(.053)			-.347*	(.046)
R^2	.041+	(.024)	.093*	(.030)	.106*	(.031)	.070*	(.028)	.112*	(.033)	.219*	(.036)
Indirect effect of public religiosity via												
search for meaning											.017	(.013)
presence of meaning											-.019	(.012)
forgiveness											-.004	(.007)
gratitude											.001	(.002)
self-control											-.029	(.019)
Indirect effect of private religiosity via												
search for meaning											.008	(.011)
presence of meaning											-.044*	(.017)
forgiveness											-.006	(.009)
gratitude											.007	(.009)
self-control											-.049*	(.020)

Note. Standardized estimates (β) are presented, and S.E. refers to standard error of estimate.
+ p < .05 (one-tailed test), * p < .05 (two-tailed test).

Supplemental Table 3. Structural Equation Models of State Anger, Depression, Frustration, and Anxiety among Prison Inmates in South Africa (n = 425)

Variable	Search for meaning	Presence of meaning	Forgiveness	Gratitude	Self-Control	Anger	Depression	Frustration	Anxiety
Age	-.111	-.021	.137*	-.033	.213*	-.112	-.013	.082	-.012
Female	-.058	.121*	-.094	.054	-.146*	.162*	.128*	.139*	.237*
Married	.026	-.007	.008	.046	.013	.014	.023	-.022	-.072
South African	.034	-.048	.119*	.136*	.078	.005	.096	.025	-.036
Protestant	.067	-.280*	-.189*	-.036	-.123	.182	.014	-.055	-.237
Catholic	-.023	-.241*	-.207*	-.116	-.146	.088	-.013	-.051	-.131
Non-Christian religion	.108	-.267*	-.280*	-.035	-.190	.204	-.025	-.087	-.201
Program participation	.033	.003	-.035	-.012	-.110	-.006	-.085+	-.085+	.034
Public religiosity	.084	.097	.122*	.017	.083	-.008	-.030	-.005	.029
Private religiosity	.039	.225*	.164*	.195*	.141*	.061	.063	.052	.119*
Search for meaning						.135*	.178*	.136*	.192*
Presence of meaning	.327*					-.160*	-.232*	-.081	-.121+
Forgiveness	.036	.158*				-.044	-.020	-.009	-.069
Gratitude	.051	.172*	.111+			.049	.046	-.022	.052
Self-Control	-.035	-.023	.090	.104*		-.317*	-.197*	-.310*	-.284*
Anger									
Depression						.409*			
Frustration						.397*	.556*		
Anxiety						.367*	.348*	.348*	
R^2	.041+	.094*	.107*	.071*	.109*	.195*	.131*	.139*	.193*
Indirect effect of private religiosity via									
search for meaning						.011	.015	.011	.016
presence of meaning						-.016	-.023	-.008	-.012
forgiveness						-.005	-.002	-.001	-.008
gratitude						.001	.001	.000	.001
self-control						-.026	-.016	-.026	-.024
Indirect effect of private religiosity via									
search for meaning						.005	.007	.005	.007
presence of meaning						-.036*	-.052*	-.018	-.027+
forgiveness						-.007	-.003	-.001	-.011
gratitude						.010	.009	-.004	.010
self-control						-.045*	-.028*	-.044*	-.040*

Note. Standardized estimates (β) are presented.
+ $p < .05$ (one-tailed test), * $p < .05$ (two-tailed test).

Supplemental Table 4. Estimated Structural Equation Models of State Anger, Depression, Frustration, and Anxiety among Male and Female Prison Inmates in South Africa

Variable	Search for meaning	Presence of meaning	Forgiveness	Gratitude	Self-Control	Anger	Depression	Frustration	Anxiety
Male sample (n = 245)									
Age	-.123	-.165	.015	-.002	.174*	-.189*	.068	.098	-.038
Married	.019	.006	.040	.008	-.034	.108	.055	-.062	-.042
South African	.051	-.054	.116	.164*	.105	.009	.175*	.066	.002
Protestant	.095	-.312*	-.125	.065	.060	.338*	.127	-.008	-.015
Catholic	.003	-.233*	-.210*	-.162	-.047	.231*	.050	-.034	.023
Non-Christian religion	.062	-.348*	-.250*	-.002	-.070	.385*	.095	-.037	-.026
Program participation	.029	.033	-.013	-.009	-.100	-.047	-.068	-.100	.094
Religiosity	.136+	.238*	.233*	.149*	.233	.094	.070	.093	.208*
Search for meaning						.067	.132*	.087	.255+
Presence of meaning	.355*					-.152*	-.178*	-.040	-.149+
Forgiveness	.064	.129+				.075	.041	.096	.044
Gratitude	.133	.229*	.098			.049	-.006	-.083	-.061
Self-Control	-.108	-.036	.153*	.020		-.376*	-.138+	-.324*	-.316*
Anger									
Depression						.431*			
Frustration						.343*	.510*		
Anxiety						.235*	.238*	.280*	
R^2	.035	.088*	.102*	.088+	.129*	.234*	.096*	.117*	.208*
Indirect effect of religiosity via									
search for meaning						.009	.018	.012	.035
presence of meaning						-.036+	-.042*	-.009	-.035
forgiveness						.018	.010	.022	.010
gratitude						.007	-.001	-.012	-.009
self-control						-.087*	-.032	-.075*	-.073*

Variable	Search for meaning	Presence of meaning	Forgiveness	Gratitude	Self-Control	Anger	Depression	Frustration	Anxiety
Female sample (n = 180)									
Age	-.147	.148*	.239*	.039	.215*	.007	-.020	.106	.032
Married	-.003	-.066	-.033	.055	.046	-.084	-.009	-.012	-.089
South African	.042	-.042	.078	.002	.007	-.018	-.021	-.042	-.053
Protestant	.026	-.282	-.277*	-.186	-.334	.029	-.014	-.052	-.412*
Catholic	-.029	-.272	-.237	-.150	-.324	-.036	-.022	-.036	-.311*
Non-Christian religion	.205*	-.208	-.315	-.021	-.266	-.003	-.064	-.101	-.336*
Program participation	.060	-.072	-.051	.013	-.098	.031	-.106	-.064	-.038
Religiosity	.094	.421*	.253*	.282*	.155*	.014	-.048	-.031	.066
Search for meaning						.193*	.215*	.172*	.154*
Presence of meaning	.295*					-.172*	-.232*	-.082	-.054
Forgiveness	-.009	.174*				-.216*	-.084	-.164*	-.211*
Gratitude	-.080	.063	.102			.086	.132	.073	.163*
Self-Control	.034	.019	.013	.200*		-.288*	-.334*	-.355*	-.313*
Anger									
Depression						.389*			
Frustration						.460*	.616*		
Anxiety						.480*	.422*	.393*	
R^2	.061*	.177*	.132*	.081+	.079*	.219*	.222*	.178*	.193*
Indirect effect of religiosity via									
search for meaning						.018	.020	.016	.014
presence of meaning						-.072*	-.098*	-.035	-.023
forgiveness						-.055*	-.021	-.041+	-.053*
gratitude						.024	.037+	.021	.046+
self-control						-.045+	-.052+	-.055+	-.049+

Note. Standardized estimates (β) are presented, and S.E. refers to standard error of estimate.
+ $p < .05$ (one-tailed test), * $p < .05$ (two-tailed test).

Supplemental Table 5. Estimated Structural Equation Models of Negative Emotions among Male and Female Prison Inmates in South Africa

	Search for meaning		Presence of meaning		Forgiveness		Gratitude		Self-Control		Negative emotions	
Variable	β	(S.E.)	β	(S.E.)	β	(S.E.)	β	(S.E.)	β	(S.E.)	β	(S.E.)
Male sample (n = 245)												
Age	-.107	(.088)	-.171	(.092)	.025	(.068)	.014	(.087)	.201*	(.086)	-.055	(.074)
Married	.080	(.072)	.063	(.079)	.059	(.065)	-.039	(.089)	-.018	(.083)	.063	(.079)
South African	.066	(.070)	-.048	(.067)	.134*	(.068)	.146*	(.068)	.122	(.070)	.102	(.068)
Protestant	.122	(.199)	-.273*	(.126)	-.136	(.102)	.050	(.129)	.076	(.160)	.158	(.149)
Catholic	.026	(.146)	-.206*	(.094)	-.216*	(.087)	-.175	(.131)	-.046	(.110)	.098	(.122)
Non-Christian religion	.086	(.181)	-.321*	(.127)	-.258*	(.104)	-.013	(.120)	-.063	(.147)	.120	(.134)
Program participation	.014	(.070)	.037	(.066)	-.026	(.062)	-.009	(.071)	-.082	(.062)	-.049	(.064)
Public religiosity	.108	(.084)	.053	(.081)	.182*	(.085)	.082	(.075)	-.017	(.069)	.005	(.068)
Private religiosity	.020	(.070)	.173*	(.069)	.113	(.071)	.090	(.087)	.243*	(.071)	.159*	(.062)
Search for meaning											.189*	(.070)
Presence of meaning	.365*	(.072)									-.196*	(.073)
Forgiveness	.070	(.075)	.141+	(.072)							.074	(.078)
Gratitude	.139+	(.083)	.235*	(.076)	.096	(.065)					-.028	(.066)
Self-control	-.086	(.060)	-.020	(.067)	.163*	(.065)	.025	(.066)			-.373*	(.059)
R^2	.033	(.031)	.078*	(.039)	.112*	(.045)	.086+	(.047)	.150*	(.052)	.196*	(.050)
Indirect effect of public religiosity via												
search for meaning											.020	(.018)
presence of meaning											-.010	(.015)
forgiveness											.013	(.015)
gratitude											-.002	(.006)
Self-control											.006	(.025)
Indirect effect of private religiosity via												
search for meaning											.004	(.013)
presence of meaning											-.034+	(.020)
forgiveness											.008	(.011)
gratitude											-.003	(.006)
Self-control											-.090*	(.031)

	Search for meaning		Presence of meaning		Forgiveness		Gratitude		Self-Control		Negative emotions	
Variable	β	(S.E.)	β	(S.E.)	β	(S.E.)	β	(S.E.)	β	(S.E.)	β	(S.E.)
Female sample (n = 180)												
Age	-.139	(.104)	.173*	(.074)	.238*	(.080)	.012	(.081)	.256*	(.075)	.030	(.084)
Married	-.004	(.085)	-.068	(.072)	-.035	(.071)	.057	(.087)	.041	(.071)	-.052	(.060)
South African	.039	(.070)	-.043	(.069)	.078	(.094)	.002	(.077)	.002	(.073)	-.044	(.065)
Protestant	.013	(.140)	-.304	(.159)	-.336*	(.142)	-.259*	(.125)	-.314	(.249)	-.150	(.136)
Catholic	-.036	(.139)	-.289	(.152)	-.271*	(.124)	-.202	(.116)	-.317	(.197)	-.133	(.116)
Non-Christian religion	.198*	(.100)	-.222	(.132)	-.347*	(.130)	-.060	(.094)	-.248	(.182)	-.171	(.121)
Program participation	.065	(.080)	-.065	(.076)	-.044	(.079)	.018	(.089)	-.100	(.082)	-.053	(.061)
Public religiosity	.042	(.084)	.193*	(.094)	.060	(.072)	-.062	(.092)	.182*	(.079)	-.028	(.077)
Private religiosity	.069	(.080)	.320*	(.100)	.239*	(.086)	.352*	(.109)	.040	(.081)	.003	(.087)
Search for meaning											.226*	(.064)
Presence of meaning	.294*	(.089)									-.156*	(.068)
Forgiveness	-.012	(.061)	.171*	(.086)							-.185*	(.076)
Gratitude	-.080	(.075)	.071	(.085)	.091	(.104)					.141*	(.062)
Self-control	.032	(.070)	.006	(.075)	.003	(.096)	.225*	(.077)			-.403*	(.071)
R^2	.061*	(.030)	.190*	(.065)	.137*	(.048)	.102*	(.057)	.097*	(.039)	.270*	(.055)
Indirect effect of public religiosity via												
search for meaning											.009	(.020)
presence of meaning											-.030	(.019)
forgiveness											-.011	(.013)
gratitude											-.009	(.013)
Self-control											-.073*	(.032)
Indirect effect of private religiosity via												
search for meaning											.015	(.019)
presence of meaning											-.050+	(.028)
forgiveness											-.044+	(.025)
gratitude											.049	(.026)
Self-control											-.016	(.033)

Note. Standardized estimates (β) are presented, and S.E. refers to standard error of estimate.
+ $p < .05$ (one-tailed test), * $p < .05$ (two-tailed test).

Supplemental Table 6. Estimated Structural Equation Models of State Anger, Depression, Frustration, and Anxiety among Male and Female Prison Inmates in South Africa

Variable	Search for meaning	Presence of meaning	Forgiveness	Gratitude	Self-Control	Anger	Depression	Frustration	Anxiety
Male sample (n = 245)									
Age	-.110	-.162	.021	-.003	.174*	-.197*	.063	.097	-.039
Married	.086	.060	.054	-.015	-.017	.143	.083	-.017	-.065
South African	.062	-.054	.133*	.155*	.121	.035	.211*	.071	-.026
Protestant	.116	-.287*	-.144	.060	.079	.355*	.139	.005	-.024
Catholic	.017	-.217*	-.220*	-.168	-.034	.242*	.061	-.023	.017
Non-Christian religion	.078	-.330*	-.269*	-.005	-.063	.391*	.098	-.031	-.035
Program participation	.015	.038	-.033	-.013	-.089	-.041	-.069	-.103	.097
Public religiosity	.112	.055	.182*	.079	-.012	-.042	-.014	.022	.065
Private religiosity	.019	.175*	.116	.088	.247*	.135	.090	.077	.169*
Search for meaning						.072	.131*	.091	.260*
Presence of meaning	.364*					-.158*	-.184*	-.042	-.149+
Forgiveness	.062	.134+				.077	.044	.094	.046
Gratitude	.134	.233*	.101			.052	.000	-.083	-.061
Self-Control	-.096	-.032	.163*	.029		-.383*	-.147*	-.327*	-.311*
Anger									
Depression						.427*			
Frustration						.341*	.507*		
Anxiety						.239*	.244*	.284*	
R^2	.035	.078*	.113*	.085+	.139*	.240*	.103*	.117*	.207*
Indirect effect of public religiosity via									
search for meaning						.008	.015	.010	.029
presence of meaning						-.009	-.010	-.002	-.008
forgiveness						.014	.008	.017	.008
gratitude						.004	.000	-.007	-.005
self-control						.005	.002	.004	.004
Indirect effect of private religiosity via									
search for meaning						.001	.002	.002	.005
presence of meaning						-.028+	-.032+	-.007	-.026
forgiveness						.009	.005	.011	.005
gratitude						.005	.000	-.007	-.005
self-control						-.095*	-.036	-.081*	-.077*

Variable	Search for meaning	Presence of meaning	Forgiveness	Gratitude	Self-Control	Anger	Depression	Frustration	Anxiety
Female sample (n = 180)									
Age	-.141	.172*	.238*	.007	.257*	.015	-.032	.091	.012
Married	-.004	-.068	-.034	.060	.044	-.085	-.008	-.011	-.087
South African	.041	-.044	.079	.006	.000	-.019	-.019	-.039	-.049
Protestant	.016	-.289	-.314*	-.238	-.307	.019	-.025	-.078	-.444*
Catholic	-.035	-.280	-.259*	-.188	-.311	-.044	-.028	-.051	-.330*
Non-Christian religion	.202*	-.212	-.332*	-.053	-.255	-.008	-.068	-.111	-.350*
Program participation	.062	-.073	-.050	.013	-.100	.031	-.104	-.060	-.034
Public religiosity	.044	.193*	.063	-.060	.184*	.021	-.050	-.057	-.039
Private religiosity	.072	.319*	.234*	.351*	.033	.001	-.014	.016	.114
Search for meaning						.194*	.215*	.172*	.151*
Presence of meaning	.293*					-.174*	-.227*	-.077	-.051
Forgiveness	-.010	.170*				-.215*	-.084	-.166*	-.217*
Gratitude	-.079	.072	.091			.091	.130	.065	.156
Self-Control	.031	.009	.012	.227		-.293*	-.330*	-.346*	-.304*
Anger									
Depression						.390*			
Frustration						.461*	.616*		
Anxiety						.481*	.420*	.389*	
R^2	.063*	.190*	.135**	.101+	.098*	.220*	.224*	.178*	.198*
Indirect effect of public religiosity via									
search for meaning						.009	.010	.008	.007
presence of meaning						-.034	-.044+	-.015	-.010
Forgiveness						-.014	-.005	-.010	-.014
Gratitude						-.005	-.008	-.004	-.009
self-control						-.054*	-.061*	-.063*	-.056*
Indirect effect of private religiosity via									
search for meaning						.014	.015	.012	.011
presence of meaning						-.056+	-.073*	-.025	-.016
forgiveness						-.050+	-.020	-.039	-.051+
gratitude						.032	.046	.023	.055
self-control						-.010	-.011	-.012	-.010

Note. Standardized estimates (β) are presented, and S.E. refers to standard error of estimate.
+ $p < .05$ (one-tailed test), * $p < .05$ (two-tailed test).

Supplemental Table 7. Estimated Structural Equation Models of Negative Emotions among Prison Inmates in South Africa (n = 425)

	Search for meaning		Presence of meaning		Forgiveness		Gratitude		Self-Control		Negative emotions	
Variable	β	(S.E.)	β	(S.E.)	β	(S.E.)	β	(S.E.)	β	(S.E.)	β	(S.E.)
Age	-.108	(.068)	-.022	(.071)	.135*	(.054)	-.019	(.066)	.221*	(.058)	-.026	(.055)
Female	-.057	(.054)	.124*	(.053)	-.092	(.053)	.052	(.054)	-.149*	(.051)	.205*	(.048)
Married	.024	(.056)	-.013	(.053)	.008	(.050)	.041	(.066)	.013	(.053)	-.010	(.047)
South African	.035	(.050)	-.050	(.052)	.116*	(.056)	.135*	(.055)	.078	(.054)	.031	(.049)
Protestant	.069	(.121)	-.279*	(.117)	-.200*	(.079)	-.028	(.098)	-.135	(.154)	-.049	(.116)
Catholic	-.022	(.101)	-.240*	(.091)	-.215*	(.069)	-.112	(.089)	-.156	(.110)	-.042	(.090)
Non-Christian religion	.109	(.104)	-.264*	(.106)	-.288*	(.077)	-.027	(.088)	-.199	(.128)	-.066	(.101)
Program participation	.033	(.052)	.003	(.048)	-.034	(.049)	-.010	(.055)	-.108*	(.049)	-.049	(.045)
Public religiosity	.081	(.057)	.096	(.064)	.124*	(.057)	.019	(.059)	.084	(.054)	-.004	(.051)
Private religiosity	.034	(.057)	.196*	(.058)	.146*	(.062)	.209*	(.081)	.157*	(.061)	.091	(.052)
(Public religiosity x private religiosity)	-.007	(.052)	-.063	(.056)	-.044	(.055)	.037	(.054)	.029	(.055)	.004	(.065)
Search for meaning											.208*	(.046)
Presence of meaning	.327*	(.058)									-.195*	(.051)
Forgiveness	.036	(.053)	.160*	(.056)							-.035	(.055)
Gratitude	.051	(.060)	.175*	(.059)	.111+	(.059)					.038	(.045)
Self-control	-.032	(.045)	-.020	(.051)	.088	(.055)	.103+	(.053)			-.347*	(.046)
R^2	.041+	(.024)	.094*	(.032)	.108*	(.031)	.071*	(.029)	.114*	(.034)	.220*	(.036)
Indirect effect of public religiosity via												
search for meaning											.017	(.013)
presence of meaning											-.019	(.012)
forgiveness											-.004	(.007)
gratitude											.001	(.002)
self-control											-.029	(.019)
Indirect effect of private religiosity via												
search for meaning											.007	(.012)
presence of meaning											-.038*	(.016)
forgiveness											-.005	(.008)
gratitude											.008	(.010)
self-control											-.055*	(.023)

Note. Standardized estimates (β) are presented, and S.E. refers to standard error of estimate.
+ p < .05 (one-tailed test), * p < .05 (two-tailed test).

Supplemental Table 8. Structural Equation Models of State Anger, Depression, Frustration, and Anxiety among Prison Inmates in South Africa (n = 425)

Variable	Search for meaning	Presence of meaning	Forgiveness	Gratitude	Self-Control	Anger	Depression	Frustration	Anxiety
Age	-.109	-.018	.137*	-.034	.213*	-.113	-.014	.082	-.013
Female	-.057	.123*	-.093	.052	-.149*	.160*	.127*	.138*	.238*
Married	.025	-.012	.006	.049	.014	.016	.025	-.021	-.070
South African	.034	-.052	.117*	.140*	.080	.008	.097	.025	-.038
Protestant	.062	-.289*	-.203*	-.024	-.131	.168	.002	-.070	-.268*
Catholic	-.026	-.246*	-.215*	-.108	-.151	.083	-.019	-.059	-.148
Non-Christian religion	.104	-.274*	-.291*	-.025	-.197	.193	-.035	-.100	-.226
Program participation	.033	.002	-.037	-.011	-.109*	-.004	-.084+	-.085+	.032
Public religiosity	.083	.097	.123*	.016	.083	-.009	-.031	-.005	.031
Private religiosity	.034	.195*	.145*	.212*	.156*	.082	.069	.053	.110
(Public x Private religiosity)	-.008	-.064	-.043	.038	.027	.043	.008	-.003	-.031
Search for meaning						.135*	.178*	.136*	.193*
Presence of meaning	.327*					-.160*	-.232*	-.082	-.123*
Forgiveness	.036	.156*				-.041	-.020	-.010	-.072
Gratitude	.051	.174*	.113+			.048	.046	-.021	.054
Self-Control	-.035	-.022	.091+	.105*		-.318*	-.198*	-.310*	-.284*
Anger									
Depression						.409*			
Frustration						.398*	.556*		
Anxiety						.368*	.349*	.347*	
R^2	.041+	.095*	.108*	.072*	.110*	.195*	.131*	.140*	.195*
Indirect effect of private religiosity via									
search for meaning						.011	.015	.011	.016
presence of meaning						-.016	-.023	-.008	-.012
forgiveness						-.005	-.002	-.001	-.009
gratitude						.001	.001	.000	.001
self-control						-.026	-.016	-.026	-.024
Indirect effect of private religiosity via									
search for meaning						.005	.006	.005	.007
presence of meaning						-.031*	-.045*	-.016	-.024+
forgiveness						-.006	-.003	-.001	-.010
gratitude						.010	.010	-.004	.011
self-control						-.050*	-.031*	-.048*	-.044*

Note. Standardized estimates (β) are presented.
+ $p < .05$ (one-tailed test), * $p < .05$ (two-tailed test).

Supplemental Table 9. Estimated Structural Equation Models of Negative Emotions among Male and Female Prison Inmates in South Africa

	Search for meaning		Presence of meaning		Forgiveness		Gratitude		Self-Control		Negative emotions	
Variable	β	(S.E.)	β	(S.E.)	β	(S.E.)	β	(S.E.)	β	(S.E.)	β	(S.E.)
Male sample (n = 245)												
Age	-.108	(.087)	-.177*	(.090)	.018	(.070)	.011	(.088)	.201*	(.086)	-.043	(.073)
Married	.081	(.071)	.067	(.082)	.064	(.069)	-.037	(.091)	-.018	(.083)	.056	(.077)
South African	.067	(.069)	-.041	(.067)	.137*	(.069)	.149*	(.069)	.119	(.070)	.095	(.067)
Protestant	.117	(.206)	-.276*	(.120)	-.133	(.096)	.049	(.128)	.081	(.163)	.171	(.113)
Catholic	.025	(.149)	-.203*	(.093)	-.211*	(.085)	-.173	(.131)	-.044	(.112)	.102	(.107)
Non-Christian religion	.081	(.187)	-.325*	(.124)	-.257*	(.099)	-.015	(.119)	-.057	(.150)	.136	(.105)
Program participation	.014	(.070)	.038	(.065)	-.025	(.062)	-.008	(.070)	-.082	(.062)	-.052	(.063)
Public religiosity	.112	(.085)	.075	(.081)	.191*	(.083)	.090	(.078)	-.018	(.068)	-.018	(.066)
Private religiosity	.022	(.069)	.196*	(.069)	.126+	(.072)	.103	(.086)	.241*	(.072)	.124*	(.062)
(Public x Private religiosity)	.020	(.087)	.136	(.085)	.069	(.078)	.062	(.074)	-.013	(.073)	-.169*	(.055)
Search for meaning											.182*	(.069)
Presence of meaning	.366*	(.073)									-.174*	(.076)
Forgiveness	.068	(.075)	.133+	(.071)							.081	(.078)
Gratitude	.137+	(.083)	.229*	(.077)	.091	(.066)					-.021	(.066)
Self-control	-.086	(.060)	-.019	(.067)	.164*	(.065)	.025	(.065)			-.378*	(.058)
R^2	.034	(.030)	.094*	(.038)	.117*	(.043)	.090+	(.048)	.149*	(.051)	.223*	(.050)
Indirect effect of public religiosity via												
search for meaning											.020	(.018)
presence of meaning											-.010	(.015)
forgiveness											.013	(.015)
gratitude											-.002	(.006)
Self-control											.006	(.025)
Indirect effect of private religiosity via												
search for meaning											.004	(.013)
presence of meaning											-.034+	(.020)
forgiveness											.008	(.011)
gratitude											-.003	(.006)
Self-control											-.090*	(.031)

	Search for meaning		Presence of meaning		Forgiveness		Gratitude		Self-Control		Negative emotions	
Variable	β	(S.E.)	β	(S.E.)	β	(S.E.)	β	(S.E.)	β	(S.E.)	β	(S.E.)
Female sample (n = 180)												
Age	-.137	(.104)	.180*	(.069)	.240*	(.078)	.012	(.080)	.257*	(.074)	.025	(.083)
Married	-.005	(.085)	-.091	(.070)	-.047	(.072)	.062	(.089)	.040	(.071)	-.045	(.060)
South African	.035	(.072)	-.069	(.068)	.069	(.097)	.009	(.077)	.001	(.073)	-.036	(.062)
Protestant	.008	(.141)	-.339*	(.164)	-.358*	(.115)	-.249*	(.124)	-.326	(.239)	-.151	(.138)
Catholic	-.039	(.140)	-.300*	(.152)	-.279*	(.109)	-.196	(.119)	-.323	(.190)	-.133	(.117)
Non-Christian religion	.193	(.101)	-.255	(.133)	-.368*	(.116)	-.053	(.096)	-.259	(.176)	-.172	(.125)
Program participation	.066	(.080)	-.062	(.071)	-.044	(.078)	.015	(.088)	-.099	(.082)	-.051	(.061)
Public religiosity	.040	(.084)	.215*	(.092)	.075	(.071)	-.068	(.092)	.185*	(.080)	-.036	(.077)
Private religiosity	.069	(.103)	.110	(.103)	.125	(.113)	.404*	(.150)	.024	(.118)	.052	(.096)
(Public x Private religiosity)	.007	(.081)	-.307*	(.075)	-.174	(.090)	.078	(.095)	-.028	(.106)	.072	(.101)
Search for meaning											.223*	(.065)
Presence of meaning	.302*	(.088)									-.140	(.072)
Forgiveness	-.013	(.062)	.141	(.084)							-.181*	(.076)
Gratitude	-.080	(.076)	.087	(.082)	.100	(.104)					.136*	(.062)
Self-control	.033	(.071)	.003	(.074)	.000	(.095)	.228*	(.076)			-.402*	(.072)
R^2	.060*	(.029)	.236*	(.066)	.150*	(.048)	.104+	(.060)	.098*	(.040)	.275*	(.055)
Indirect effect of public religiosity via												
search for meaning											.009	(.020)
presence of meaning											-.030	(.019)
forgiveness											-.011	(.013)
gratitude											-.009	(.013)
Self-control											-.073*	(.032)
Indirect effect of private religiosity via												
search for meaning											.015	(.019)
presence of meaning											-.050+	(.028)
forgiveness											-.044+	(.025)
gratitude											.049	(.026)
Self-control											-.016	(.033)

Note. Standardized estimates (β) are presented, and S.E. refers to standard error of estimate.
+ $p < .05$ (one-tailed test), * $p < .05$ (two-tailed test).

Supplemental Table 10. Estimated Structural Equation Models of State Anger, Depression, Frustration, and Anxiety among Male and Female Prison Inmates in South Africa

Variable	Search for meaning	Presence of meaning	Forgiveness	Gratitude	Self-Control	Anger	Depression	Frustration	Anxiety
Male sample (n = 245)									
Age	-.110	-.168	.013	-.006	.173*	-.189*	.079	.106	-.034
Married	.086	.062	.057	-.014	-.017	.140	.073	-.024	-.069
South African	.064	-.048	.136*	.157*	.119	.033	.203*	.065	-.033
Protestant	.110	-.293*	-.142	.056	.085	.364*	.157	.020	-.010
Catholic	.015	-.216*	-.216*	-.166	-.031	.245*	.068	-.017	.028
Non-Christian religion	.072	-.337*	-.268*	-.009	-.057	.401*	.121	-.013	-.015
Program participation	.015	.040	-.031	-.012	-.090	-.044	-.074	-.107	.089
Public religiosity	.118	.078	.191*	.088	-.014	-.052	-.043	-.002	.047
Private religiosity	.021	.198*	.130+	.101	.245*	.115	.054	.048	.139
(Public x Private religiosity)	.019	.136	.068	.065	-.014	-.087	-.169*	-.143*	-.125*
Search for meaning						.068	.124+	.083	.253*
Presence of meaning	.364*					-.145*	-.158*	-.020	-.131
Forgiveness	.060	.125+				.079	.054	.102	.051
Gratitude	.133	.225*	.096			.056	.009	-.076	-.049
Self-Control	-.096	-.030	.164*	.029		-.387*	-.152*	-.331*	-.311*
Anger									
Depression						.418*			
Frustration						.330*	.495*		
Anxiety						.224*	.226*	.265*	
R^2	.036	.094*	.117*	.089*	.139*	.249*	.128*	.135*	.219*
Indirect effect of public religiosity via									
search for meaning						.008	.015	.010	.030
presence of meaning						-.011	-.012	-.002	-.010
forgiveness						.015	.010	.019	.010
gratitude						.005	.001	-.007	-.004
self-control						.005	.002	.005	.004
Indirect effect of private religiosity via									
search for meaning						.001	.003	.002	.005
presence of meaning						-.029	-.031+	-.004	-.026
forgiveness						.010	.007	.013	.007
gratitude						.006	.001	-.008	-.005
self-control						-.095*	-.037+	-.081*	-.076*

Variable	Search for meaning	Presence of meaning	Forgiveness	Gratitude	Self-Control	Anger	Depression	Frustration	Anxiety
Female sample (n = 180)									
Age	-.139	.179*	.240*	.007	.257*	.012	-.036	.083	.011
Married	-.005	-.090	-.046	.065	.258*	-.078	-.002	-.003	-.082
South African	.038	-.070	.069	.014	.043	-.014	-.014	-.031	-.043
Protestant	.009	-.326*	-.339*	-.227	.000	.013	-.019	-.068	-.463*
Catholic	-.039	-.292	-.268*	-.181	-.318	-.045	-.024	-.044	-.341*
Non-Christian religion	.195	-.246	-.354*	-.046	-.317	-.016	-.062	-.101	-.370*
Program participation	.063	-.069	-.048	.009	-.266	.033	-.102	-.058	-.032
Public religiosity	.042	.215*	.077	-.066	-.100	.012	-.057	-.067	-.041
Private religiosity	.073	.108	.120	.405*	.187*	.050	.026	.068	.138
(Public x Private religiosity)	.008	-.308*	-.174	.080	.017	.076	.063	.080	.022
Search for meaning					-.029	.192*	.213*	.167*	.152*
Presence of meaning	.302*					-.161*	-.214*	-.059	-.044
Forgiveness	-.011	.140+				-.212*	-.081	-.160*	-.219*
Gratitude	-.079	.088	.100			.087	.127	.058	.156
Self-Control	.032	.006	.010	.231*		-.292*	-.329*	-.344*	-.305*
Anger									
Depression						.387*			
Frustration						.458*	.614*		
Anxiety						.478*	.419*	.386*	
R^2	.062*	.237*	.149*	.103+	.099*	.222*	.227*	.182*	.203*
Indirect effect of public religiosity via									
search for meaning						.008	.009	.007	.006
presence of meaning						-.035	-.046+	-.013	-.009
Forgiveness						-.016	-.006	-.012	-.017
Gratitude						-.006	-.008	-.004	-.010
self-control						-.054*	-.061*	-.064*	-.057*
Indirect effect of private religiosity via									
search for meaning						.014	.016	.012	.011
presence of meaning						-.017	-.023	-.006	-.005
forgiveness						-.026	-.010	-.019	-.026
gratitude						.035	.051	.024	.063
self-control						-.005	-.006	-.006	-.005

Note. Standardized estimates (β) are presented, and S.E. refers to standard error of estimate.
+ $p < .05$ (one-tailed test), * $p < .05$ (two-tailed test).