

DISSERTATION

RELIGION, MEANING, AND BELIEF IN A JUST WORLD

Submitted by

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In partial fulfillment of the requirements

For the Degree of Doctor of Philosophy

Colorado State University

Fort Collins, Colorado

Summer 2017

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## ABSTRACT

### RELIGION, MEANING, AND BELIEF IN A JUST WORLD

The present study examined a meaning-making model, focusing on the impact of Coping, Posttraumatic Growth, Life Meaningfulness, Belief in a Just World, Well-Being, and God Images. The path analysis generally mirrored a model Park and colleagues' (2008) constructed in their examination of meaning-making among cancer patients. The purpose of this study was to replicate their model and investigate its interactions with God Images. This research was undertaken to offer new insights into the meaning-making model and extend knowledge of God Images in clinical work and research. The present study's sample consisted of military veterans and undergraduate psychology students. The path model for the present study was significant and generally conformed to Park and colleagues' (2008) meaning-making model. The God Images behaved as expected with some exceptions. The God images Present and Providence significantly moderated mediation relationships in the meaning-making model. The God image, Present, moderated the effect of Posttraumatic Growth mediating Coping and Life Meaningfulness of the model. God as Present also moderated the effect of Life Meaningfulness mediating Posttraumatic Growth and Well-Being. The God Image, Providence, moderated the effect of Belief in a Just World mediating Coping and Life Meaningfulness. Providence also moderated the effect of Life Meaningfulness mediated Posttraumatic Growth and Belief in a Just World. Discussion of the implications of these findings for research and clinical work follow.

## ACKNOWLEDGMENTS

I would like to thank God. I would also like to thank Ernest Chavez and Bryan Dik for their steadfast support over the years. I would also like to thank Sylvia Jaramillo, Maria Lesaria Jaramillo, Vicente Jaramillo, and all my family members who supported me in my endeavors.

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## REVIEW OF THE LITERATURE

When people experience a traumatic event, they may develop psychological disturbances related to the anxiety associated with the trauma. Diagnostically, this translates to Acute Stress Disorder and Posttraumatic Stress Disorder (PTSD). Acute stress disorder (ASD) is characterized by anxiety, dissociation, and other symptoms within one month after the experience of a stressor. It is estimated that up to 33% of people who experience a traumatic stressor will develop ASD (Gibson, 2017). Among people who have ASD, more than 80% will continue to experience symptoms over one month and will develop PTSD (Gibson, 2017). According to the Diagnostic Statistical Manual (2001), PTSD is characterized by exposure to an extreme traumatic stressor which results in intense fear, helplessness, or horror. Symptoms include a psychological re-experiencing of the event, avoidance of trauma-associated stimuli, “numbness,” and increased arousal. Unlike ASD, PTSD symptoms must persist for longer than one month. The prevalence of PTSD in the United States indicates that it is a serious problem confronted by many people.

Approximately 3.5% of the adult population in the U.S. suffers from PTSD and approximately 1.3% of the adult population in the U.S. has severe PTSD (NIMH, 2010). The average age of onset for PTSD is 23 years. Although the causes of these stressors can vary, it is clear that there is a need to address the effects of trauma. For example, 57.4% of people with PTSD are actually receiving treatment for the disorder. An even smaller percentage (23.3%) is receiving minimally adequate treatment as defined by the National Institute of Mental Health (NIMH, 2010). Fortunately, there are viable treatment options for those who are able to receive treatment for PTSD. Among the treatment options for PTSD, cognitive processing therapy

(CPT) is one that is empirically supported. CPT acknowledges how traumatic experiences change people's beliefs about themselves, others, and the world (VA, 2012). Care providers may be especially interested in focusing on such beliefs. To assist providers attempting to address ASD and PTSD, it is imperative that research provide a framework to help them understand the effects of psychological trauma in the context of individuals' beliefs.

### **Meaning-Making and Coping**

Investigators have examined the nature and roles of the beliefs people hold in stressful or traumatic situations. The present study is particularly interested in the meaningfulness of beliefs. Frankl (1992) was among the earliest to address the role of meaning in people's belief systems and its utility in adapting to challenging situations. Park and Folkman (1997) proposed that people generally experience two forms of meaning: Global meaning and situational meaning. They suggested that global meaning consists of a person's beliefs about the world, themselves, and themselves in the world. Life experience informs global meaning as people develop assumptions of stability for the world and themselves. They also tend to develop optimistic expectations for themselves in the world. People commonly hold beliefs that the world is benevolent, that they themselves are good, and that they can expect to experience good things--because the world is fair (Rubin & Peplau, 1975). These beliefs tend to influence the ways in which people experience situational meaning.

Situational meaning is the integration of global beliefs within a given situation (Park & Folkman, 1997). When confronted with a traumatic stressor, people form appraisals about the stressful situation and its relevance to them. According to Park and Folkman (1997), a person's global beliefs inform such appraisals and guide them following the stressor. Specifically, people make sense of the events they have experienced using their general understanding of themselves and the world to maintain consistency: They put a "spin" on the story so that it fits their global

beliefs. This can be effective in interpreting new information as people make sense of their experiences through their lens of global meaning. There are, however, situations when a person's global meaning is violated to such an extent that she or he must find alternative ways to make sense of it.

Sometimes people encounter a situation so jarring that it puts their global beliefs into question. They may form appraisals of that situation that are in conflict with their sense of global meaning. This can shatter crucial assumptions that are construed from their global meaning frameworks. These experiences may result in feeling a loss of control, unpredictability, and thinking that the world no longer makes sense. Trauma survivors have reported that their self-image was negatively impacted and they felt more vulnerable following the traumatic experience (Gluhoski & Wortmann, 1996). As Janoff-Bulman (1992) described, people have their assumptive worlds *shattered* by traumatic events and they consider the world to be malevolent, life to be bereft of meaning, and themselves to be unworthy of good things. Religious beliefs and teachings may offer people guidance in their belief systems. Some investigators have taken note of religious beliefs and their influence in meaning-making systems (Park & Gutierrez, 2013)

### **Religion as a Meaning-Making system**

Researchers have extensively examined the idea of religion as a meaning-making system. Meaning-making systems reflect cultural beliefs, which often include religious beliefs (Park, Edmondson & Mills, 2010). This is especially relevant to the U.S. population, considering the majority of U.S. citizens claim affiliation with a religious faith (Pew Research Center, 2014). For many reasons, religious beliefs may be at the heart of people's global meaning systems (2010). Pargament (1997) suggested that religion could effectively help people comprehend



suffering. Religious beliefs are powerful because they are typically comprehensive in addressing people's questions about existence and they are unlikely to be disconfirmed given their foundation in something sacred (Emmons, 2005). The influence of religion has been noted at different points in Park's (2005) meaning-making coping model.

In a general sense, religion can affect aspects of global meaning such as beliefs about fairness, control, benevolence in the world, and vulnerability. Park (2005) suggested that initial distress after a stressor might be higher among religious individuals than non-religious people. After an extended period following the stressor, though, the influence of religion can lower distress. For people who hold strong religious beliefs, religion may be especially prominent in meaning-making because its pervasive presence may make it chronically accessible and omnipresent in their lives. This means that religious attributions can be more easily made for traumatic events. In support of this idea, Kunst, Bjorck, and Tan (2000) found that university students who endorsed higher religiosity were more likely to attribute negative events to God or spiritual forces whereas less religious participants were more likely to attribute negative events to the natural world or chance. Park and Gutierrez (2013) observed that participants who believed God was in control experienced greater fear and anxiety than those who did not believe this.

Although people have the ability to frame experiences in accordance with their beliefs, they may still have difficulty coming to terms with disparities between their global meaning and situational meaning. Religion is seen as contributing to this reconciliation of disparities. Harris and colleagues (2015) highlighted the importance of religion as part of the meaning-making system, noting how the religious meanings which survivors make of their trauma serve as a better predictor of adjustment than the trauma severity itself.

An examination of the meaning-making model offers direction on how people try to reconcile the discrepancy between global meaning and situational meaning. As mentioned earlier, this global-situational meaning discrepancy leads to distress. Such distress can result in negative emotions, depression, loss of interest, and sometimes even physical decline (Skaggs & Barron, 2005). When this happens, people assess their psychological resources to help them alleviate this distress, a process known as coping.

### **Coping**

In order to address these issues and relieve their distress, people engage in coping behavior. Coping strategies can help people reconcile the differences between situational meaning and global meaning. This is termed meaning-making coping (Park, 2005). Meaning-making coping is a cognitive process in which people try to re-interpret the information from their experience in an alternative way so that they can believe their meaning-making system is not senseless. This is also called reappraisal (Gillies & Neimeyer, 2006). Some people develop positive reappraisals when they successfully identify benefits from the situation that help them to adapt to the event. These efforts to relieve their distress and find resolution are not always successful, though. If people determine that their resources for coping are inadequate in addressing their discomfort and finding resolution, they will engage in a search for meaning, which can be indicative of further distress.

Some people find resolution by using religious beliefs incorporated into their global meaning systems to inform reappraisals of their situational meaning (Pargament & Park, 1997). For example, survivors of war, displacement, and torture (Bryant-Davis & Wong, 2013) have reported religious coping strategies. Research suggests that survivors with more severe PTSD engage in more frequent religious coping strategies than those with less severe PTSD. Positive

religious coping is thought to support protective functions for interpersonal trauma survivors; however, if a trauma survivor feels judged or rejected by God, they tend to experience greater distress (2013).

### **Religious Appraisals and Reappraisals**

Religious beliefs may be instrumental in forming appraisals. Appraisals are the types of meanings people assign to events if the situations represents a threat or challenge to a significant component of their beliefs (Pargament & Park, 1997). This can happen early in the meaning-making process. For example, Pargament (1997) suggested that people might apply religious beliefs immediately after encountering stressors. It is important to note that the availability of religious belief systems does not necessarily mean that devoutly religious people will not be afflicted by the trauma. Pargament and Park (1997) found it important to refute the assumption that using religious appraisals necessitates passive avoidance of difficult information. Rather, people can develop religion-informed appraisals that may serve negative or constructive ends; religion does not necessarily shield people from negative experiences.

Yates and colleagues (1981) reported that cancer patients who endorsed more strongly held religious beliefs were no less likely to experience pain as patients who scored lower on religious beliefs, suggesting that religious participants were no less aware of their pain than less religious participants. Still, they could have used religion to develop more adaptive appraisals based on the idea that God does not give them more difficulty than they can handle.

Alternatively, they could also make appraisals suggesting that God is trying to communicate something important to them or that God (Pargament, 1997) is punishing them. Seirmarco, Inself, Neria, and Litz (2012) found that religious beliefs are subject to change following trauma, they observed increases and decreases in religious beliefs among survivors of the September 11<sup>th</sup>

terrorist attacks in the U.S. In addition to informing appraisals, religious beliefs are employed later in the meaning-making process, such as when making reappraisals.

People may draw from religious beliefs in reappraising situations. Because religious beliefs are considered very stable, people who hold strong religious beliefs are more likely to develop reappraisals that reconsider the situation in a way that fits their pre-existing belief system than they are to change their religious beliefs. Bigman and colleagues (2015) found that religious people tend to engage in reappraisals more often and more effectively than non-religious people. Among their participants, cognitive reappraisals made with their religious framework led to greater positive affect, less negative affect, greater mental health, and better well-being (2015). When reappraisals actually involve some change to religious beliefs, they may include finding a benevolent religious interpretation for the stressor, looking for more positives in the situation, or seeing God as punishing. Wortmann and Park (2009), who reviewed qualitative research on coping with traumatic events, observed examples of such reappraisals. Among the themes, they noticed were anger and disillusionment toward God. Reappraisals may not always be successful in relieving distress. If the trauma or stressor is particularly incongruent with a person's global meaning and if reappraisal efforts are inadequate in alleviating the person's distress, they may change their global beliefs to make their situational meaning seem more acceptable.

### **Meaning Reconstruction**

Sometimes people need to rebuild their global meaning after encountering severe trauma because they cannot reconcile their beliefs with traumatic events. People change their meaning-making systems in a cognitive process. Perhaps the most distressing aspect of coping with loss is the failure to make sense of the situation, which Gillies and Neimeyer (2006) suggest leads to

doubt and turmoil. It is unsurprising, then, that people tend to try to rebuild their meaning-making systems by using previously held assumptions while also finding reasons for why challenging events could have happened. Some people might reconsider ordinary events and reframe their former belief systems to make them more congruent with the information thrust upon them by the present trauma (Skaggs & Barron, 2006). An example of this might be a war veteran who, after experiencing an attack at a marketplace in a foreign country, feels unsafe passing through a public area with vendors in his hometown. As with other stages of the meaning-making model, religious beliefs can be part of this process.

### **Religion and Meaning Reconstruction**

When people change their global meaning following a particularly traumatic experience, those who hold strong religious beliefs may reevaluate the nature of those beliefs. For deeply religious people, this could result in drastic changes in their beliefs about God. Often times, they deliberate on the concept of theodicy. Theodicy attempts to explain the problem of human suffering: reconciling the belief in an all-good and all-powerful God with the knowledge that evil and suffering are present in the world. This can be especially difficult when a person believes suffering or evil has personally affected them. People might try to reconcile this belief by viewing evil and suffering as necessary in order to practice good virtues such as mercy and compassion. They could also view suffering as a means to spiritual growth or as a necessary precedent for a greater ultimate good. Baumeister (1991) referred to this as an “attributional blank check,” in which a person is convinced their difficulties will somehow result in a desirable outcome even if they do not know what that outcome is. Sometimes, however, questions related to theodicy are not resolved in a way that reinforces a person’s faith.

In an effort to reconcile the problems posed by theodicy, some people may develop a new conception of God as being less powerful than they had previously thought. Alternatively, they might conclude that they cannot possibly comprehend God's reasoning in their situations. They could also come to see themselves as more sinful. In some instances, they may cease to believe in God altogether. When such drastic changes occur, people task themselves with developing new understandings of themselves, the world, themselves in the world, and God.

Wortmann and Park (2009) found that people change the meaning of their situation by changing their views of God. For example, some people shifted their perceptions from God being judgmental to God being benevolent and removing blame from God. Others changed their beliefs about God's role in negative events and perceived God as being present in the situation, which could lead to positive or negative views of God's role. Sometimes this occurs as people make minor adjustments to components of their belief systems and rituals. One example from Wortmann and Park (2009) involved a person who went from expecting God to be a "rescuer" to forging a more passive view of God following the loss of a loved one. Another involved a person who stopped attending church services but continued to engage in other religious rituals after a loved one's death.

Those with strong religious beliefs may also adopt various coping approaches to help them find meaning after a stressful event. Employing one's religious beliefs in coping may be an automatic process that can occur without prompting, as Richards (2001) observed among male partners of AIDS victims who reported spiritual aspects of their experiences, despite not being asked about faith. Similarly, Rosenblatt (2002) found that parents who had lost a child involved God and faith as part of their narratives as they tried making sense of the deaths. Investigators have proposed other religious coping approaches people commonly use following a trauma. Ter

Kuile and Ehring (2014) found that people tend to use more religious coping strategies when they have a high prevalence of religious cognitions.

Some thought processes used in coping involve placing the responsibility for finding a resolution to one's distress solely on God (Pargament and Park, 1997; Pargament et.al., 1988). Another coping approach may be more self-directed, in which the person believes God has equipped him or her with the tools needed to resolve the problem. A third approach entails a collaborative effort between the individual and God in which both are active in solving the problem of their situation (1997). People who hold strong religious beliefs are thought to be most likely to use religious coping methods such as prayer, seeking support from clergy or fellow believers, or doing good deeds.

The approaches and strategies people use to cope vary and may be used in accordance with the specific needs religion meets for them, whether it be stability, social support, or the ability to relinquish control to an outside force (Pargament & Park, 1997). Coping is heavily influenced by many variables that are unique to the individual, including religious denomination and the presence of religion in their social environment. Because people are more likely to use coping methods that are the most available and the most compelling to them, it follows that religion-informed coping mechanisms are available and compelling to those for whom religious beliefs are highly important (Ter Kuile & Ehring, 2014).

In one study of religion's impact on coping, McIntosh, Silver, and Wortmann (1993) examined religious coping among mothers following the loss of a child to sudden infant death syndrome (SIDS). Results indicated that religious participation was indirectly associated with faster meaning-making after the loss through the social support that was part of religious participation. Involving religion also seemed to result in "working through" their distress. The

investigators found that, while religious participation (behaviors) was not related to cognitive processing, higher religiosity (beliefs) was related to cognitive processing. Some authors have identified cognitive processing as a sign of meaning-making among those who have been victimized. When people successfully engage in meaning making, they are thought to have attained cognitive closure; continued meaning-making efforts and rumination stop, which leads to lower distress and resolution (Park, Edmondson, Fenster, and Blank, 2008). Interestingly, this may occur among those who hold self-critical beliefs. For example, Ter Kuile and Ehren (2014) found that religious coping, even with negative beliefs like self-blame results in fewer PTSD symptoms and fewer shattered assumptions; possibly, because this helps adherents more easily fit the events into an existing schema. Beyond reaching cognitive closure, people also may later point to their traumatic experience as resulting in personal growth.

### **Posttraumatic Growth**

In her effort to specify posttraumatic growth, Janoff-Bulman (2004) proposed that successful recovery from trauma does not mean a person returns to holding their previous assumptions about the world or themselves. Instead, it involves developing an assumptive world that integrates their traumatic experiences. The author explored three models to help explain ways in which coping results in posttraumatic growth. One model, called strength through suffering, posits that people are made psychologically stronger after being challenged. Janoff-Bulman (2004) likened it to the strength developed after physical strain, such as in muscle building through resistance training. Another model insists that posttraumatic growth is best described as preparedness gained from trauma to help survivors confront future trauma. This can be seen as a learning experience to prepare for more challenges. The last model Janoff-Bulman (2004) reviewed regarded posttraumatic growth as existential reevaluation in which people



endorse more appreciation of life having experienced trauma. As compelling as these models are, there are yet other ways of conceptualizing posttraumatic growth.

Park (2004) wrote on the apparent growth people experienced following traumatic events. Growth, Park suggested, can be found in a number of ways. For example, people made large changes such as rebuilding their approach to life and changing the ways in which they prioritize things. Park also noted that growth was evident in people making smaller-scale changes in their lives such as the development of more coping skills, increased social support, increased intimacy with loved ones, better managing stress, more self-care, having a clearer understanding of themselves, greater appreciation for mundane aspects of everyday life, and a willingness to try new things (2004). Another component of posttraumatic growth may involve identifying benefits of their stressful situation.

Previous investigators have explored the connection between finding benefits in a challenging situation and posttraumatic growth. Helgeson, Reynolds, and Tomich (2006) attempted to uncover how benefit-finding is related to health outcomes using meta-analysis. They suggested that time may be important; inferring that benefit-finding shortly following the stressor may actually less accurately reflect growth than benefit-finding that occurs a longer time after the stressor. The investigators also looked at the nature of the traumatic event, stressor severity, and the instruments designed to measure health outcomes to determine if the relationships differed. The remaining variables they examined pertained to individual differences such as demographic characteristics (sex, ethnicity), personality traits (optimism, religiosity, and neuroticism), and coping strategies (positive reappraisal, acceptance, and denial). The meta-analysis suggested that benefit-finding was more strongly related to lower depression and greater positive affect if two years or more had passed since the trauma than if less time had

passed since the trauma. Benefit-finding was related to higher global distress if fewer than two years had passed since the trauma. Notably, the nature of the stressor was not particularly informative in examining the effect of benefit-finding on health outcomes. The investigators found that using well-established measures resulted in stronger relations between benefit finding and higher global distress, higher intrusive/avoidant thoughts, and worse perceived physical health. Interestingly, when samples consisted of 25% or more minority group members, benefit-finding was related to less distress. The opposite was found for samples with less than 25% minority group members. It appears that women were more likely than men to engage in benefit-finding as did younger people. Benefit-finding was unrelated to marital status and socioeconomic status. Those who endorsed higher levels of optimism and religiosity engaged in more benefit-finding (neuroticism was unrelated to benefit finding). Positive reappraisal, acceptance, and denial were all associated with benefit-finding. One of the most striking implications from the analysis was that benefit-finding is related to lower depression and greater positive affect but it was also related to more intrusive/avoidant thoughts about the stressor. This speaks to the complex nature of posttraumatic growth.

It is important to highlight the discussion taking place in defining posttraumatic growth because it may not be very straightforward. Gillies and Neimeyer (2006) reported that having a coherent sense of meaning is related to lower grief severity but engaging in the search for meaning is associated with higher grief severity. They surmised that the relationship between growth and grief/distress is not clear enough to assume that the two are polar opposites along the same continuum. Rather, it implies that the meaning-making process that leads to posttraumatic growth can occur in the context of distress and suggests that growth and distress are distinct concepts. The concept of posttraumatic growth may be relevant to people who have a religious

framework and their attempts to readjust following traumatic stressors may involve using their belief systems to identify positive or negative aspects of their traumatic experiences.

### **Religion and Posttraumatic Growth**

Although various investigators have examined the effects of trauma on religious beliefs, the findings are mixed. Trauma has been shown to both strengthen religious beliefs and to weaken religious meaning-making. For example, Downey and colleagues (1990) found that parents who lost a child to SIDS experienced less distress if they placed responsibility for the event on God rather than on themselves. In other studies, participants reported that their self-image and beliefs in justice were significantly affected by trauma, although they only documented this among participants whose trauma only occurred once (Park, Edmondson, and Mills, 2010). Others found increased intrinsic religiosity after multiple victimizations (Falsetti et al., 2003). Furthermore, results among people with posttraumatic stress disorder (PTSD) were inconsistent. For example, 20% of people with PTSD in some studies reported being becoming more religious following the trauma whereas 30% of those with PTSD in other studies reported becoming less religious following the trauma. The varied results of these studies represent complications in identifying religion's role in meaning-making following trauma. It appears that religious coping is hardly a smooth process. For some religious survivors, their trauma initiated the process of deepening spiritual and religious understanding, which grew over time. The trauma survivors still reported considerable distress while experiencing growth and obstacles to growth seemed to exacerbate their post-trauma anguish (De Castella & Simmonds, 2013). People are also less likely to use difficult experiences for spiritual growth if they remain comfortable with their faith following a trauma (Harris et al., 2015). This suggests that the

process of posttraumatic growth is itself a continuously demanding one after the trauma has already happened.

Pargament (1997) observed inconsistent differences in religiosity following trauma, which may be due to people using both religious and non-religious coping methods. Meaning systems, including religious meaning systems, are dynamic in nature. Park and Edmondson (2010) suggested that, although they are unlikely to encounter many situations that will shatter their global meaning, people might encounter multiple stressors throughout their lives in which their religious meaning-making systems have to adapt to new information. People are also less likely to use difficult experiences for spiritual growth if they remain comfortable with their faith following a trauma (Harris et al., 2015). Accordingly, Gerber and colleagues (2011) noted that spiritual doubts could lead to growth. They suggested that modifying or abandoning religious belief symptoms is not necessarily a harmful thing if the trauma survivor can discover new life philosophies. Still, some groups may find strength by embracing their long-held religious beliefs. According to Pargament (2011), “[for] those with limited means and few alternatives, religion can take on even greater power as one of the few genuine resources for living” (p. 146). This includes ethnic minorities (especially Latinos) and women, who endorsed a high ability to maintain a positive outlook (2011).

These variations in belief-informed outcomes ought to be examined in the context of meaning-making and coping. Wortmann and Park (2009), who recommended that investigators examine specific characteristics of religious meaning-making systems, including God concepts, to understand how they may address meaning discrepancy, voiced this sentiment. Some work has been done in this area. Bryant-Davis and Wong, (2013), in their study of religious coping among military veterans, reported that trauma survivors experience more hopelessness and higher

distress if they feel judged and/or rejected by God. Their study alluded to Feder and colleagues' (2008) finding that Vietnam veterans who engaged in positive religious coping reported feeling optimistic. This may be subject to the perceptions believers hold about their God.

### **God Images and the God Concept**

To understand how researchers arrived at the construct called God image, it is important to know examine the early ideas surrounding God concepts. Researchers have examined beliefs people hold about God since the 1970s. Early on, the term God concept was used to describe how people define God. Early researchers to examine impacts on psychological healthy individuals used the God Concept. Benson and Spilka (1973) proposed that God concepts might be represented by five categories: God as negative, God as positive, God as loving/controlling, God as rejecting/accepting, and God as maternal/paternal. They tested how these concepts related to mental health and found that self-esteem correlated positively with God concepts that were loving or accepting and correlated negatively with God concepts that were rejecting. Despite some of the early work's application to psychological variables, some researchers were unsatisfied with using God concept to identify how people feel about God.

The God Concept was considered to embody an intellectual dictionary definition of the term "God." In contrast, some authors proposed using a different construct in which God is viewed in context of a relationship (Lawrence, 1997; Steenwyk et.al., 2010; Hill & Hall, 2002). Rizzuto (1970), for example, described the God image as a psychological internal working model of the "person" God is thought to be. Psychological researchers investigated the notion of considering God in relationship with the self as opposed to relying on an intellectual definition offered by the God concept.

Hill and Hall (2002) argued that, because people are social creatures who live in many relational contexts, religious people usually live in relationship with that which they consider sacred. In the case of religious people who hold Judeo-Christian beliefs, this relationship is with the God they have come to know from the Bible (Old and New Testaments). The authors offered suggestions for identifying the ways in which God in relationship may be viewed. Among them are viewing God in a symbolic interactionist sense. This entails examining how a person constructs their self-image through their interactions with God. Taking this approach requires that one have a dynamic image of God that may change depending on what the person seeks in the relationship. It also considers how a person constructs their self-image in the relationship with God. God in relationship has also been discussed in other ways.

Hill and Hall (2002) proposed that investigators could also examine the relational aspects of God from an object relations perspective. This implies that people judge their interpersonal interactions based on their cognitive representations of another person, emotions evoked by those representations, and their conception of the relationship with the other person. Another theory that can be applied to God in relationship involves using a classification based on a communal or exchange relationship. In an exchange relationship, partners try to maintain equity and attempt to correct perceived inequity by doing something beneficial for the other partner. They also expect the other partner to do the same for them. In contrast, communal relationships partners benefit each other without expecting benefit from the other partner. Hill and Hall (2002) proposed that people who view God as being in an exchange relationship may see God as demanding, punitive, and justice-oriented. People who perceive a communal relationship with God are expected to see God as caring and gracious (2002). Ultimately, the authors emphasized the importance of viewing God in relationship, viewing the theory people choose to examine the

relationship as secondary in importance. Some researchers agreed with the importance of relationship and attempted to utilize God images in relation to other psychological constructs.

Steenwyk and colleagues (2010) attempted to apply the idea of God image to life satisfaction and happiness. They conducted factor analyses among 264 university students' responses to God concept items and maternal/paternal ratings of God. Included in their instruments were items developed by Benson and Spilka (1973). They identified three scales of God images: Loving God, Controlling God, and Permissive God. Interestingly, the three scales seemed to parallel parenting styles (Baumrind, 1968). Specifically, the Loving God scale reflected authoritative parenting in which the parent provides adequate support and control. The Controlling God scale was similar to authoritarian parenting, which involves high control without support. The Permissive God scale, conveniently, matched the permissive parenting style that is high in support but lacks control. Steenwyk and colleagues (2010) suggested that this could mean people make associations with God similarly to the way they make parental associations. Although this study provided interesting insights into the nature of God images, it did not provide a clear basis for measuring them in research. Others, however, have developed an approach to operationalizing the God image that is intended to be applied to research.

Lawrence (1997) was interested in extending Rizzuto's (1979) notion of God image into research. Like previous researchers, Lawrence noted that God images can be developed much like "mother" or "father" representations- through experiences with that person. Although similarities between God images and parental representations were acknowledged, he distinguished the God image from parental relational images, arguing that the God representation is not based on direct experiences with God. Because direct personal experience is not necessary for the relationship to exist, a representation of God can be adapted as needed by the individual.

Also, the God image can be an exaggeration of parent representations, although the basic parental information that forms the God image can be transformed. Defense mechanisms may be used to support a favorable self-image. The unique nature of God images were also described by Lawrence (1997), who likened the God image to a “transitional object” (Winnicott, 1953), something that resides on the border between oneself and the external world. A more defined understanding of God images was beginning to take shape and researchers made efforts to adequately measure them.

Lawrence (1997) developed two instruments to measure God images. The God Image Index (GII) is an extensive measure (156 items) recommended for clinicians hoping to gain deeper insight into the construct for their clients. The God Image Scale (GIS) is a shortened measure (72) items that lends itself more easily to research. The God Image Scales are based on three main topics: Belonging, Goodness, and Control. Each of the God image scales refers to one of these three topics, classifying the God image as either primitive and self-focused or more developmentally mature and focused on the relationship with God. This leaves six scales. Under the topic of Belonging are the Presence and Challenge scales; under the topic of Goodness are the Acceptance and Benevolence scales; and under the topic of Control are the Influence and Providence scales. Such God images can be tied to people’s global beliefs and how they see God and/or the world as fair and just.

People’s religious beliefs may inform how they view God as fair and just. This likely informs their beliefs that the world is just. People holding strong religious beliefs may perceive justice and fairness in light of what religious teachings have instructed. Lerner (1980) posited that Just World beliefs among devoutly religious people from Judeo-Christian traditions will reflect the nature of their God. For instance, the God of Judeo-Christian traditions is often seen



as merciful and just, a God who protects the righteous from unnecessary suffering, although this assumption may not be entirely appropriate for everyone belonging to these religious traditions. As mentioned earlier, Park and Gutierrez (2013) noted that viewing God as being in control of events in their lives was associated with higher anxiety. Specifically, viewing God as in control of negative events can increase fear for the future among believers, perhaps because they expect God's judgment to be harsh towards them.

Theories concerning belief in a just world in a religious context are likely to vary with religious traditions. Believers might refer to the story of Job, who experienced great suffering and whose faith through it all was eventually validated. They might also look to the life of Jesus Christ, focusing on how his suffering and death brought redemption from sin and the prospect of eternal life to humankind. Before delving into details about religion-specific belief in a just world, an overview of the theory and research on just world beliefs is warranted.

### **Belief in a Just World**

As mentioned earlier, people generally hold global beliefs referring to themselves, the world, and themselves in the world. Among their beliefs, concerning the world is the assumption that the world is coherent, fair, and just (Lerner, 1980). Initially, the term Just World was used as a metaphor rather than a psychological construct. Gradually, it evolved into a construct which psychological researchers took interest in measuring. Lerner (1997) suggested that belief in a just world involves a desire for an environment that is stable, controllable, and benign. Most people adopt strong notions of deservingness and justice for themselves in the world through developmental learning in which they are rewarded for meeting conditions as children to receive a reward (Hafer & Begue, 2005).

Lerner (1997) also indicated that even people who explicitly deny holding Just World beliefs can still develop belief systems which emphasize justice and behave as if they can expect justice in the end. In this way, people can hold on to beliefs in a just world if they see their trials as temporary; they expect that ultimate justice will come even if not in their own lifetime. As people see their own setbacks as temporary, they become willing to endure hardships believing that they are engaged in a heroic endeavor. Indeed, there are benefits to believing in a just world. In fact, Lerner (1997) summarized research on just world beliefs and reported that people who held higher confidence in the justness of the world experienced less anxiety and greater self-confidence; this led them to perform better on tasks than participants who did not have as much confidence in a just world. People who think that the world is a setting in which people get what they deserve practice just world beliefs, meaning people are rewarded for being good and punished for being bad. This raises the question about the origin of just world beliefs and their consequences.

According to Rubin and Peplau (1975), people may hold just world beliefs early in their childhood related to Piaget's (1965) concept of "immanent justice," where they believe that their deeds or misdeeds lead to punishment or rewards. Rubin and Peplau (1975) suggested that just world beliefs can lead people to admire fortunate people and derogate victims of circumstance. They also considered people who hold strong just world beliefs to be more religious, more authoritarian, and more likely to attribute reinforcements to internal control than those who hold weaker just world beliefs. The present study is concerned with the impact of just world beliefs on people's efforts to make sense of particular situations. Belief in a just world has been applied to hypothetical situations and has revealed surprising information about its power.

Hafer and Begue (2005) examined how Just World beliefs inform people's perceptions of others in experimental manipulations. They commented on the strength of Just World beliefs and noted that people apply their belief in a just world even when the justness of the world is not being explicitly questioned, namely in ambiguous situations. When people are presented with information about a victim experiencing hardship, they may make judgments about the victim's character and morality according to their perceptions of innocence and the availability of help for the victim (2005). They might attribute a person's suffering and lack of resources to help with the suffering to that person being immoral or undeserving of fair treatment. This has also been demonstrated in earlier research.

Appelbaum and colleagues (2006) compared how people judge others' deservingness of help using a vignette about someone trying to get out of poverty. They found that participants who held weak beliefs in a just world were less likely to derogate a vignette character and found the character more deserving of aid because they did not experience a threat to their beliefs. Alternatively, participants who held strong just world beliefs experienced a threat to their beliefs in the vignette, derogating the character and believing her less deserving of aid. Interestingly, derogation from these participants was strongest when the character made considerable efforts to get out of poverty but still failed. Appelbaum and colleagues (2006) suggested that this occurred because this represented the strongest threat to their beliefs in a just world. Gaps in the research on Just World remain, though.

Hafer and Begue (2005) argued that there is a dearth of research regarding how people perceive their own victimization in the context of believing in a just world. Lerner (1980) proposed that people would not take such extremely punitive approaches to their own victimization and would not try to justify their own unfair treatment. Hafer and Begue (2005)

acknowledged that belief in a Just World has typically been used in research as an individual difference variable in correlational research and does not make a distinction between justice for others and justice for oneself. The available work on justice for oneself has suggested that people tend to defend their beliefs in a Just World when they are subjected to unfair treatment. This would hold particular relevance in the case of people trying to clarify their beliefs about themselves after experiencing a traumatic stressor. Theoretical reasoning has led some researchers to examine how belief in a Just World can change in the context of trauma and meaning-making.

### **Just World Beliefs and Meaning-Making**

Beyond their influence on pre-trauma global meaning, Just World beliefs may also be important in the process of coping with distress. As people reach some resolution following a significant stressor, referred to as “meaning made,” it is thought that their beliefs in a Just World are restored (Holland & Reznick, 2005). Park and colleagues (2008) also proposed that posttraumatic growth occurs when people have regained their sense that the world is fair and just and have found meaning following a significant stressor. Park and colleagues (2008) examined the ways in which this happens and found that meaning-making coping was not directly related to restored beliefs in a Just World among cancer patients. They did find, however, that restoration of Just World beliefs was indirectly related to meaning-making coping via mutual relationships to growth and life meaningfulness. All the variables (coping, belief in a Just World, growth, and life meaningfulness) were positively related to one another. The investigators strongly suggested that better measures of just world beliefs be used to further examine the relations between these variables.

Beyond considering how general meaning-making is related to Just World beliefs, it is worth revisiting the relationship between belief in a Just World and religious beliefs. The influence of belief systems involving religion may inform how people perceive justness of the world and fair/unfair treatment of others and themselves. Although experimental studies looking at Just World beliefs among religious people are limited, what is available has yielded some interesting findings.

### **Just World Beliefs and Religion**

In a study, examining beliefs about God and the world as just, Pargament and Hahn (1986) presented scenarios to university students who endorsed moderate to high religious commitment to Christian beliefs. Participants were presented situations in which they were told they had acted either responsibly or irresponsibly and the outcome was either a positive or negative health consequences. Participants made more attributions to God's will in situations where the behavior and outcome were inconsistent (i.e., Responsible Behavior-Negative Outcome) than in situations where irresponsibility led to negative outcomes. Generally, participants attributed positive outcomes more to God's love than they did to negative outcomes, although some participants attributed God's love to negative outcomes as well. They also were more likely to attribute scenarios in which the outcome was negative to God's anger than they were in positive outcome scenarios. Interestingly, some participants discounted that they had acted responsibly when the outcome was negative, possibly to sustain their belief in a Just World or that God was justifiably angry. This suggests that Just World beliefs are active in global meaning systems for religious people.

Investigators should be cautious, however, when attempting to make direct connections between religious beliefs to Just World beliefs. Sorrentino and Hardy (1974) reported that scores

on religiosity and belief in a Just World are positively correlated. Zweigenhaft and colleagues (1985) attempted to replicate their findings among a large group of religiously diverse students and were unable to find the same relationship. Similarly, Hunt (2000) performed analyses looking at the influence of religious denomination (Protestant or Catholic) and religious involvement (church attendance) on belief in a Just World. Those who were affiliated with a religious denomination were no more likely to believe in a Just World than those who were not affiliated. They also found that religious involvement did not predict Just World beliefs. Taken together, research suggests that any relationship between religiosity and belief in a Just World is more complex than previously thought.

### **The Present Study**

To summarize, research has found associations between situational and global meaning and religious beliefs. It has also described how religion influences coping through appraisals, reappraisals, and meaning reconstruction. Posttraumatic growth and religiousness share a complex relationship that appears to depend on the intricacies of one's beliefs. Perhaps the most heavily researched concept examined in this study, belief in a just world, has demonstrated ties to meaning-making coping via posttraumatic growth and life meaningfulness. Religious beliefs have compensated for Just World belief violations. God images may add another dimension of understanding to the meaning-making process. The present study attempts to examine how the concepts of life meaningfulness, coping, posttraumatic growth, and belief in a just world interact with one another and how those concepts can affect well-being among those who have experienced trauma. This study intends to revisit the work by Park and colleagues (2008) and expands upon it by including God images in the analyses.

## Hypotheses

Similar to the findings from Park and colleagues (2008), direct and partial mediation relationships are expected between positive reframing (Coping), Posttraumatic Growth, Life Meaningfulness, and Belief in a Just World (see Figure 1).

Specifically:

1. There will be a positive correlation between Coping and Posttraumatic Growth.
2. Posttraumatic Growth will mediate the relationship between Coping and Life Meaningfulness.
3. There will be a positive correlation between Posttraumatic Growth and Life Meaningfulness.
4. Life Meaningfulness will mediate the relationship between Coping and Belief in a Just World.
5. Life Meaningfulness will mediate the relationship between Posttraumatic Growth and Belief in a Just World.
6. There will be a positive correlation between Life Meaningfulness and Belief in a Just World.

It is also expected that the strength of the above-hypothesized relations will vary as a function of their scores on the God Image Scale (GIS). The God Images “Benevolence,” “Providence,” “Present,” and “Acceptance” carry themes of God’s altruistic goodness and active influence in their lives; whereas the God Images “Influence” and “Challenging” suggest the relationship with God is transactional and conditional. Using Benson and Spilka’s (1973) work as a referent, it is expected that loving and accepting God images will be associated with stronger relationships

between the variables of interest, whereas God images that are considered challenging will be associated with weaker relationships between the variables of interest.

Therefore:

7. Higher endorsement of God images associated with Presence, Acceptance, Benevolence, and Providence will result in stronger relationships between the variables of interest (Coping, Posttraumatic Growth, Life Meaningfulness, Belief in a Just World, and Well-Being). Specifically, the God Images associated with Presence, Providence, Accepting, and Benevolent will moderate the relationships between the specific components of the path model. Those components are Posttraumatic Growth mediating the relationship between Coping and Life Meaningfulness, Life Meaningfulness mediating the relationship between Posttraumatic Growth and Belief in a Just World, Life Meaningfulness mediating the relationship between Coping and Belief in a Just World, and Life Meaningfulness mediating the relationship between Posttraumatic Growth and Well-Being. The effect of the moderation by God Images will result in higher scores on the dependent variables. Higher endorsement of God Images associated with Challenge and Influence will exhibit weaker relationships between the variables of interest.



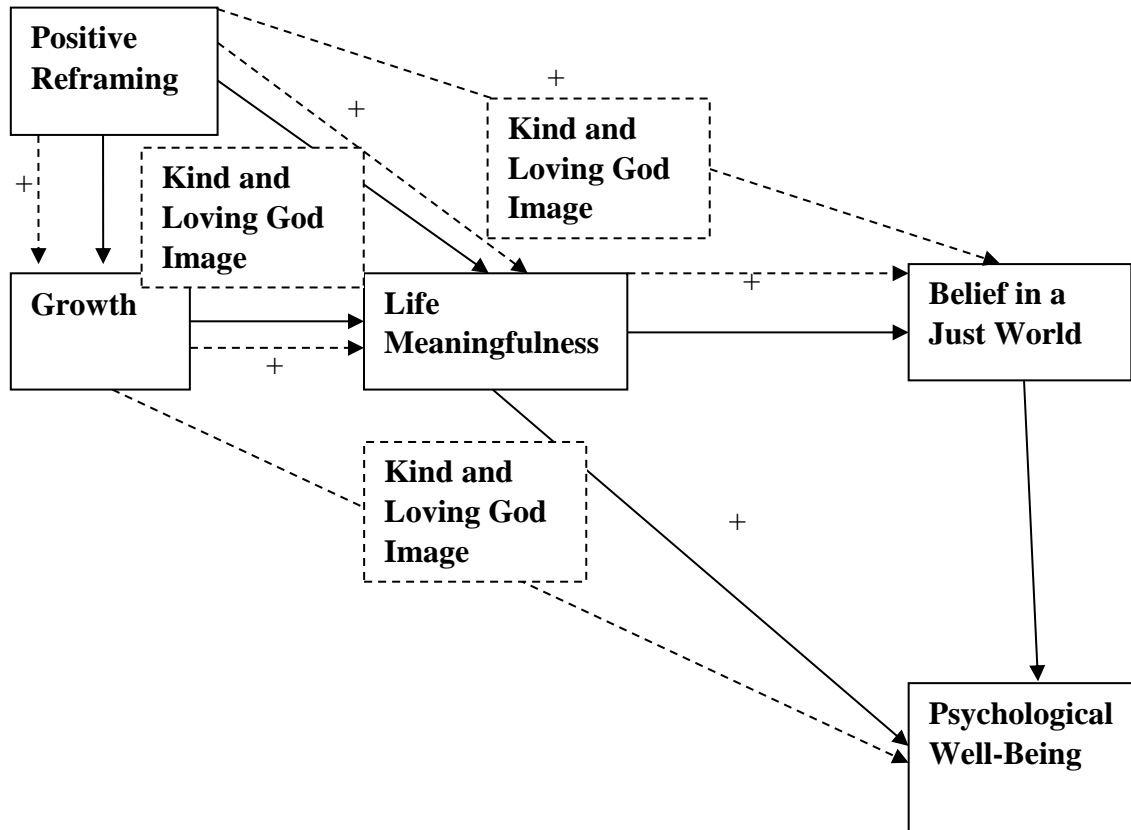


Figure 1.

*Note.* In reference to hypotheses 1 thru 6, solid lines represent the expected path connections between components of the meaning-making model. As per hypothesis 7, the dashed lines suggest the moderating effect of God images.

## METHOD

### Participants and Procedure

**Recruitment of Veterans.** To obtain data sufficient for the study, the investigator attempted to collect data from Veterans through the VA system. Unfortunately, the study required approval by the IRB used by the VA Medical Center independently of CSU's IRB. The study also required a co-sponsor at the VA who is already an established principal investigator there. A third obstacle was the fact that the investigator did not have status as a current employee or volunteer within the VA system. Finally, to recruit participants through the VA, the investigator must have either used instruments already approved by the VA or go through a vetting process to have them approved, a process that could take 18 months for each measure. These barriers prohibited participant recruitment from the VA.

Because of these obstacles, the investigator contacted over 20 American Legion halls in the state, over 10 Veterans of Foreign War offices, five student veteran groups, and over 30 other military veterans organizations ranging from Wounded Warriors to motorcycle groups. In addition to these resources, the investigator posted flyers in public areas in Denver and northern Colorado. The investigator also posted a link to the survey on Facebook and on Craigslist. In all, this initial recruitment effort resulted in 91 participants.

**Veteran Sample.** The demographics for the Veterans sample were as follows: 66 males and 17 females. 78 (94.0%) were white, one (1.2%) was African American, one (1.2%) was Latino, two (2.4%) were Asian-American, and one (1.2%) identified as "other." 21 (25.3%) identified as "Mainline Christian," three (3.6%) identified as "Evangelical Christian," 18 (21.7%) identified as Roman Catholic, 12 (14.5%) identified as "other Christian," one (1.2%)

identified as Buddhist, and 28 (33.7%) identified with an “other” category. Those who selected “other” ranged from those who considered themselves, atheists, agnostics, humanists, deists, Lutherans, Methodists, nondenominational, Pagans, or having no affiliation. A total of 58 (69.9%) participants reported believing in God, while 14 (15.4%) reported not believing in God. 11 (12.1%) participants declined to answer this question. Similarly, 60 (72.3%) participants endorsed “trauma” in the past ten years while 23 (27.7%) participants did not. Also, 70 (76.9%) of the participants were discharged from the military while 11 (12.1%) were active duty, and 25 (30.1%) participants had served in the Army, 12 (14.5%) had served in the Navy, 20 (24.1%) had served in the Air Force, 19 (22.9%) had served in the Marines, one (1.2%) had served in the Coast Guard, and 5 (6.0%) had served in the National Guard or Air National Guard.

The investigator consulted with a statistician at CSU who recommended trying to match the number of participants from the Park et al. study. During the consultation, the consultant stated that there is no power analysis for the procedure being performed in this study, a path analysis. AMOS was the program used for the analysis.

**Recruitment of Students.** When performing PATH analyses in AMOS, it became apparent that identifying differences in the model based on God Images was unlikely given the small sample size of veterans. Upon consulting with the advisor and co-advisor, the investigator determined that obtaining more data would be necessary to ensure high enough power for the analyses. The investigator decided to obtain samples from the Colorado State University PSY100 research pool. Students were screened based on their score on the PTSD Checklist-Civilian version (PCL-C). 100 students, who endorsed the highest PCL-C scores, were selected to participate. Among them, 89 agreed to participate.

**Student Sample.** The demographics for the Students sample were as follows: 27 males and 62 females. A total of 70 (78.7%) were White, two (2.2%) were African American, ten (1.1%) were Latino, and seven (7.9%) were Asian-American. 16 (18.0%) identified as “Mainline Christian,” five (5.6%) identified as “Evangelical Christian,” 16 (18.0%) identified as Roman Catholic, nine (10.1%) identified as “other Christian,” one (1.1%) identified as Buddhist, three (3.4%) identified as Hindu, and 39 (43.8%) identified with an “other” category. Those who selected “other” ranged from those who considered themselves, atheists, agnostics, humanists, Pentecostal, Taoist, nondenominational, Pagan, Wiccan, or having no affiliation. A total of 52 (58.4%) participants reported believing in God, while 24 (27.0%) reported not believing in God; 13 (14.6%) participants declined to answer this question. Also, 52 (58.4%) participants endorsed “trauma” in the past ten years while 37 (41.6%) participants did not, and 18 (20.2%) of the participants were discharged from the military while one (1.4%) were active duty. Finally, 15 (16.9%) participants had served in the Army, 5 (5.6%) had served in the Navy, 4 (4.5%) had served in the Air Force, six (6.7%) had served in the Marines, one (1.1%) had served in the Coast Guard, and 4 (4.5%) had served in the National Guard or Air National Guard.

## **Instruments**

**Brief COPE.** The study employed the Brief Cope (Carver, 1997) to measure positive reframing by Park and colleagues (2008). It is a shortened version of a longer instrument that is considered more suitable for research purposes. The Brief COPE consists of 28 items which are rated on a four-point Likert-type scale. Each item asks about ways in which people can adapt positively to their situation. An example of an item is: “I’ve been getting help and advice from other people.” Scores on the Brief COPE have demonstrated test-retest reliability coefficients ranging from 0.50 to 0.90 over one year and six-month intervals, respectively. Factor analyses

have also indicated that its scales are structured appropriately for measuring coping methods. The internal consistency of the scale in this study was excellent (Cronbach's  $\alpha = 0.98$ ).

**MLQ.** The Meaning in Life Questionnaire (MLQ) will be used to measure the variable, Life Meaningfulness. This measure will be used in place of The Perceived Personal Meaning Scale (Wong, 1998). The MLQ is expected to provide specific information about presence of meaning in life and is unique in that it differentiates search for meaning from presence of meaning. The MLQ is a ten-item questionnaire that was designed to measure meaning in life (Steger, 2006). Items are rated using a seven point Likert-type scale. It assesses search for meaning in life as well as presence of meaning in life. The MLQ has demonstrated good internal consistency ( $\alpha = 0.86 - 0.88$ ) and test-retest (one month) reliability (0.70 for the search scale and 0.73 for the presence scale). MLQ scores have also demonstrated convergent validity among other instruments that measure meaning ( $r = 0.29 - 0.74$ ) and discriminant validity with unrelated constructs. The internal consistency of scores the "Presence" scale among this study's participants was good (Cronbach's  $\alpha = 0.92$ ).

**Just World Scale.** Developed by Rubin and Peplau (1975), the JWS is 20-item scale that has been used in research to examine the extent to which people believe that the world is a fair and benevolent place. Items are rated using a six-point Likert-type scale. The JWS seeks to measure, as an individual difference variable, the extent to which people see themselves and others as deserving of their fates across situations. It includes items such as "People who meet with misfortune have often brought it on themselves." Scores on the scale have demonstrated good split-half reliability ( $\alpha = 0.81$ ). The JWS has demonstrated validity as it has produced significant correlations with variables expected to be related to represent approval of existing political and social institutions. For example, negative correlations between just world beliefs

and social activism indices ( $r = -0.29$ ) and involvement with political or social action groups ( $r = -0.20$ ). The internal consistency of scores on this scale in this study was acceptable (Cronbach's  $\alpha = 0.70$ ).

**The Stress Related Growth Scale.** Park and colleagues (1996) developed the SRGS. It consists of 50 items which aim to measure improved functioning related to social resources, personal (self-oriented) resources, and coping skills. Participants rate items using a three-point Likert-type rating scale. Scores on the scale have demonstrated good internal consistency reliability ( $\alpha = 0.90$ ) and test-retest reliability ( $r = 0.81$ ). They also have demonstrated construct validity through informant reports ( $r = 0.21 - 0.31$ ) and by significantly predicting variables such as optimism, positive affectivity, satisfaction with social support, and a greater number of social support resources. Although factor analysis has not successfully yielded subscales within the scale, all items sufficiently load onto a single factor. This makes it useful for those interested in examining positive change following a traumatic stressor. The internal consistency of the scale in this study was high (Cronbach's  $\alpha = 0.93$ ).

**God Image Scales.** Lawrence (1997) developed this instrument to measure specifically for use in research. It measures how people may view God in relationship. The GIS consists of 72 items, which are rated using a four-point Likert-type rating scale. GIS scores have demonstrated high internal consistency reliability ( $\alpha = 0.81 - 0.95$ ), and demonstrated good construct validity as demonstrated by high positive correlations with scores on other religious variables ( $r = 0.36 - 0.82$ ) and the Bell Object Relations Inventory (BORI). The GIS was based on data obtained from 1580 adult respondents in the U.S. For this sample, the internal consistency of the subscales varied depending on the subscale. For example, internal consistency for the subscales identifying God as, "Influence or Benevolent" was poor

(Cronbach's  $\alpha = 0.58$  and Cronbach's  $\alpha = 0.34$ ). However, internal consistency for scores on the subscales describing God as "Acceptance, Present, Providence, or Challenging" ranged from good to excellent (Cronbach's  $\alpha = 0.80$ ,  $\alpha = 0.95$ ,  $\alpha = 0.81$ , and  $\alpha = 0.83$  respectively). The output of the reliability analysis revealed that the internal consistency of the "Influence" subscale would have been excellent if one item, "God always answers prayers" were removed (Cronbach's  $\alpha = 0.91$ ). Similarly, the internal consistency of scores on the "Benevolent" subscale also increased with the removal of one item, "God's compassion has no boundaries," were removed ( $\alpha = 0.72$ )

#### **Medical Outcome Survey Short Form-12 (SF-12).**

The mental component score (MCS) of the Medical Outcome Survey was used by Park and colleagues to measure psychological well-being among their participants. The survey consists of 12 items and has demonstrated good internal consistency reliability ( $\alpha = 0.82$ ). Its scores have also demonstrated high convergent validity with scores on scales measuring anxiety/depression and general health ( $r = 0.61$  and  $r = 0.45$ , respectively) as well as moderate convergent validity with scales measuring perceived mental health ( $r = 0.38$ ). It measures items such as: "How much of the time have you felt downhearted or blue?" using a 6-point Likert-type scale. Higher scores indicate higher degree of well-being. It has demonstrated good reliability and validity among various populations of interest (Cheak-Zamora, Wyrich, & McBride, 2009). It demonstrated good internal consistency among this study's participants (Cronbach's  $\alpha = 0.75$ ).

## **Analyses**

The investigator consulted with a statistician at Colorado State University, who recommended matching the number of participants from the Park et al. study. The statistical consultant stated that there is no power analysis for the procedure being performed in this study, a path analysis. AMOS is the program used for the analysis. The Veteran participants' data were combined with the student participants' data to test the efficacy of the overall model. This study's aim to uncover the influence of God Images on the variables in question presented an opportunity to conduct moderated mediation analyses in using the PROCESS macro (Hayes, 2015) in IBM SPSS. The investigator conducted moderated mediation analyses using segments of the path model and having variables serve as either independent, dependent, or mediator variables. God Images served as moderators using model 59 in PROCESS. The investigator used Model 59 because it presumes that the moderator impacts all relationships in the mediation model. Initially, analyses used each God Image total score as a continuous variable. Although PROCESS provided tests of conditional direct and indirect effects at one standard deviation below the mean, at the mean, and one standard deviation above the mean for each (continuous) moderator, there was no index of moderated mediation. After corresponding via email with Andrew Hayes, the investigator determined that model 59 only provides a definitive test of moderated mediation when the moderator is a dichotomous variable. Upon examining the levels at which the conditional indirect effects displayed significance in these analyses, the investigator repeated the analyses using dichotomous God Image scores as moderators.



## RESULTS

### Descriptive Statistics

The assumptions for path analysis include linear relationships between the variables, causal closure, and unitary variables (Lessem, 2002). Scatterplots suggested linearity among the variables. The path model met the causal closure assumption as all direct influences for variables are portrayed in the path model. All variables in the path model were unitary variables. Linearity is also an assumption for moderated mediation and scatterplots indicated that the moderated mediation analyses met this assumption. Means, standard deviations, and correlation coefficients are presented below for the full sample and with students and Veterans separated.

Table 1. *Means and Standard Deviations of the study's variables.*

	Mean	Standard Deviation	Minimum	Maximum
Life Meaningfulness	24.631	6.961	5.000	35.000
Belief in a Just World	68.415	9.548	45.000	99.000
Posttraumatic Growth	35.557	7.259	15.000	45.000
Coping	60.559	13.887	28.000	88.000
Well-Being	34.161	5.410	21.000	43.000
Influence	31.439	8.640	13.000	48.000
Benevolent	23.966	7.238	12.000	45.000
Accepting	24.321	6.816	12.000	45.000
Present	29.083	10.306	11.000	48.000
Providence	34.021	6.782	18.000	48.000
Challenging	25.966	7.090	12.000	45.000

Table 2. *Veterans Sample Means and Standard Deviations of the study's variables.*

	Mean	Standard Deviation	Minimum	Maximum
Age	41.230	16.652	21.000	80.000
Life Meaningfulness	26.092	6.409	9.000	35.000
Belief in a Just World	67.772	10.386	45.000	97.000
Posttraumatic Growth	34.035	6.451	22.000	45.000
Coping	58.667	13.901	28.000	88.000
Well-Being	35.068	5.346	22.000	43.000
Influence	30.591	9.676	13.000	48.000
Benevolent	22.864	7.302	12.000	45.000
Accepting	22.864	7.175	12.000	37.000
Present	26.636	10.042	11.000	44.000
Providence	34.508	6.867	20.000	48.000
Challenging	25.576	8.101	12.000	44.000

Table 3. *Student Sample Means and Standard Deviations of the study's variables.*

	Mean	Standard Deviation	Minimum	Maximum
Age	20.400	4.114	18.000	40.000
Life Meaningfulness	23.310	7.209	5.000	35.000
Belief in a Just World	69.012	8.717	48.000	99.000
Posttraumatic Growth	36.634	7.634	15.000	45.000
Coping	61.928	13.798	28.000	85.000
Well-Being	33.333	5.367	21.000	42.000
Influence	32.122	7.700	15.000	48.000
Benevolent	24.854	7.106	12.000	43.000
Accepting	25.525	6.298	13.000	45.000
Present	31.127	10.137	12.000	48.000
Providence	33.625	6.729	18.000	48.000
Challenging	26.288	6.167	13.000	39.000

Table 4. *Correlation Coefficients (Pearson R) between this study's variables.*

	Life Meaningfulness	Belief in a Just World	Posttraumatic Growth	Coping	Well- Being
Life Meaningfulness	-				
Belief in a Just World	-0.408**	-			
Posttraumatic Growth	0.426**	-0.217*	-		
Coping	-0.073	-0.021	0.136	-	
Well-Being	0.469**	-0.330**	0.217*	-0.273*	-
Influence	-0.417**	0.261**	-0.255**	0.086	-0.257**
Benevolent	-0.366**	0.252**	-0.313**	-0.006	-0.202*
Accepting	-0.504**	0.360**	-0.354	0.039	-0.310**
Present	-0.426**	0.285**	-0.246**	0.080	-0.286**
Providence	-0.305**	0.173*	-0.207*	0.141	-0.202*
Challenging	-0.354**	0.240**	-0.314**	0.065	-0.220**

\*\*  $p < .01$

\*  $p < .05$

Table 4. *(Continued)*

	Influence	Benevolent	Accepting	Present	Providence	Challenging
Influence	-					
Benevolent	0.692**	-				
Accepting	0.728**	0.854**	-			
Present	0.933**	0.754**	0.791**	-		
Providence	0.843**	0.563**	0.559**	0.807**	-	
Challenging	0.820**	0.849**	0.822**	0.850**	0.676**	-

\*\*  $p < .01$

\*  $p < .05$

### **Full Sample Path Model**

The results of the full sample demonstrated a significant path model. There are more known parameters than free parameters ( $df = 4$ ), which suggests that the model is over-identified. The chi square value was not significant ( $\chi^2 = 8.962, p = 0.062, RMSEA = 0.083$ ), which means that the model significantly differed from predictions made in the default model. In this case, the model supports the study's hypotheses based on the cross-sectional model developed by Park and colleagues (2008). In the current model, Posttraumatic Growth significantly regressed on Coping ( $b = 0.24, p = 0.004$ ). Presence of Meaning in Life significantly regressed on Coping ( $b = -0.31, p < 0.001$ ). Presence of Meaning in Life significantly regressed on Posttraumatic Growth ( $b = 0.50, p < 0.001$ ). Belief in a Just World significantly regressed on Presence of Meaning in Life ( $b = -0.41, p < 0.001$ ). Well-Being significantly regressed on Presence of Meaning in Life ( $b = 0.41, p < 0.001$ ). Well-Being significantly regressed on Belief in a Just World ( $b = -0.16, p = 0.032$ ). See Figure 2 for a layout of the complete path model.

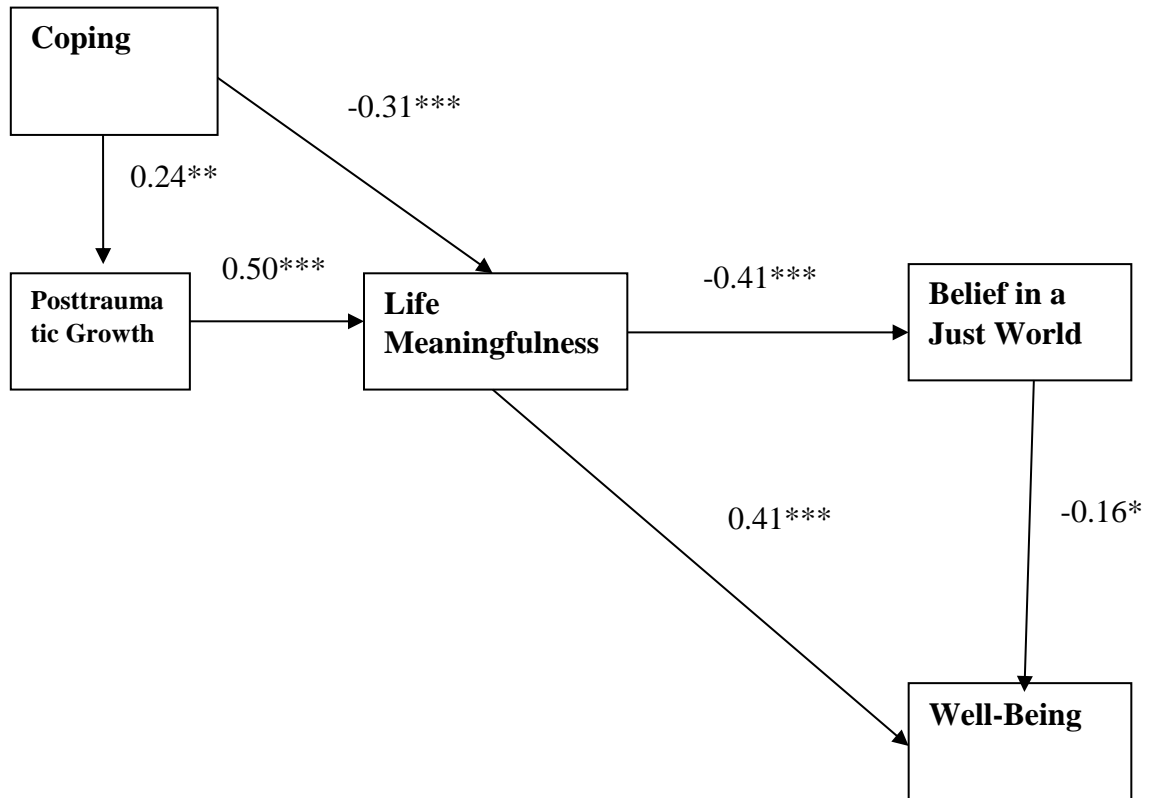


Figure 2. *The path model for the present study.*

\*\*\*  $p < .001$

\*\*  $p < .005$

\*  $p < .05$

## Hypotheses Testing

The first hypothesis, which predicted a positive correlation between Coping and Posttraumatic Growth, was supported ( $r = .14, p = 0.022$ ). The path analysis found a similar relationship ( $b = 0.66, p < 0.001$ ). See Table 5.

Table 5. *Comparisons for Hypotheses 1, 3, and 6*

	Correlation Coefficient	Significance
Coping and Posttraumatic Growth	.136	.022
Posttraumatic Growth and Presence of Meaning in Life	.426	<.001
Presence of Meaning in Life and Belief in a Just World	-.408	<.001

The second hypothesis was supported in that Posttraumatic Growth mediated the relationship between Coping and Life Meaningfulness as evidenced by the indirect effect being significant ( $b = 0.014, 95\%, CI = 0.031, 0.004$ ) and the direct effect being non-significant ( $b = -0.018, 95\% CI = -0.054, 0.018$ ). See Table 6 for more information.

Table 6. *Mediation Analyses for Hypotheses 2, 4, and 5*

	Indirect Effect Coefficient	95% Confidence Interval	Direct Effect Coefficient	95% Confidence Interval
Coping -> Posttraumatic Growth -> Presence of Meaning in Life	0.014*	0.031, 0.004	-0.018	-0.054, 0.018
Coping -> Presence of Meaning in Life -> Belief in a Just World	0.001	-0.009, 0.064	-0.003	-0.010, 0.005
Posttraumatic Growth -> Presence of Meaning in Life -> Belief in a Just World	-0.202*	-0.345, -0.106	-0.075	-0.292, 0.143

\*  $p < .05$

Results also supported hypothesis three: There was a significant positive correlation between Posttraumatic Growth and Life Meaningfulness ( $r = 0.43, p < 0.001$ ). See Table 5 for more information. The path analysis found a similar relationship ( $b = 0.50, p < 0.001$ ).

For the fourth hypothesis, Life Meaningfulness did not mediate the relationship between Coping and Belief in a Just World (see Table 6). Results supported the fifth hypothesis as Life Meaningfulness mediated the relationship between Posttraumatic Growth and Belief in a Just World, with the indirect effect being significant ( $b = -.202$ , 95% CI = -0.345, -0.106) and the direct effect being non-significant ( $b = -0.075$ , 95% CI = -0.292, 0.143).

The sixth hypothesis predicted a significant relationship between Life Meaningfulness and Belief in a Just World. There was a significant negative relationship between the two variables ( $r = -.41$ ,  $p < 0.001$ ;  $b = -0.41$ ,  $p < 0.001$ ). Mediation analyses with the same variables also found a negative relationship between the two variables. There will be more to follow on this analysis in the discussion.

The seventh hypothesis predicted that high endorsement of God images associated with Present, Acceptance, Benevolence, and Providence would demonstrate stronger relationships between the variables of interest, i.e., Coping, Posttraumatic Growth, Life Meaningfulness, Belief in a Just World, and Well-Being. Higher scores on God Images associated with Challenge and Influence would exhibit weaker relationships between those variables. The following results used Preacher, Rucker, and Hayes' (2007) moderated mediation analysis. As stated earlier, analyses initially included God Image scores as continuous moderators, but the investigator converted the scores to dichotomous variables after corresponding with Andrew Hayes (A. Hayes, personal communication, January 20, 2017). The investigator examined the skewness of the continuous moderators and the levels at which they produced significant effects on the dependent variables. The two significant God Images were Providence and Present. These variables were positively skewed and so were converted into a dichotomous variable by splitting at one standard deviation below the mean. The moderated mediation with a dichotomous

moderator produces an index score, which reflects the relationship between the indirect effects of predictor variables on the dependent variable to the God Image moderators. Using bootstrapping (5,000 samples), a 95% confidence interval determines significance of this effect.

Results revealed that posttraumatic Growth mediated the relationship between Coping and Life Meaningfulness ( $b = .072$ , 95% bootstrap CI = .014, 0.102); higher Coping predicted greater Life Meaningfulness as a function of Posttraumatic Growth. The God Image, Present, moderated this relationship (Index = 0.073, 95% bootstrap CI = 0.014, 0.171). See Table 7 for more results of this analysis. The indirect effect of Coping on Life Meaningfulness through Posttraumatic Growth increases as a function of God as Present. This was significant at high levels of God as Present and not at low levels of this moderator. See Figure 5 and Figure 6 for visual representations of this effect.



Table 7. Unstandardized OLS Regression Coefficients With Confidence Intervals (Standard Errors in Parentheses) Estimating Posttraumatic Growth and Life Meaningfulness.

	Posttraumatic Growth ( <i>M</i> )			Life Meaningfulness ( <i>Y</i> )	
	Coefficient	95% CI		Coefficient	95% CI
Coping ( <i>X</i> ) $a_1$	-0.042 (0.112)	-0.264, 0.179	$c'$	0.138 (0.097)	-0.330, 0.054
Posttraumatic Growth ( <i>M</i> )			$b_1$	0.109 (0.267)	-0.419, 0.637
Present ( <i>W</i> )			$b_2$	-16.380 (13.240)	-42.579, 9.818
<i>M</i> x <i>W</i>			$b_3$	0.327* (0.278)	-0.224, 0.878
Constant	42.173 (7.202)***	27.925, 56.421		35.092 (12.858)*	9.650, 60.533
Index of Moderated Mediation				0.073 (0.040)*	0.014, 0.171
	$R^2 = 0.132$			$R^2 = 0.345$	
	$F(3,130) = 6.587, p < 0.001$			$F(5,128) = , p < 0.001$	

\*  $p < .05$ , \*\*  $p < .005$ , \*\*\*  $p < .001$

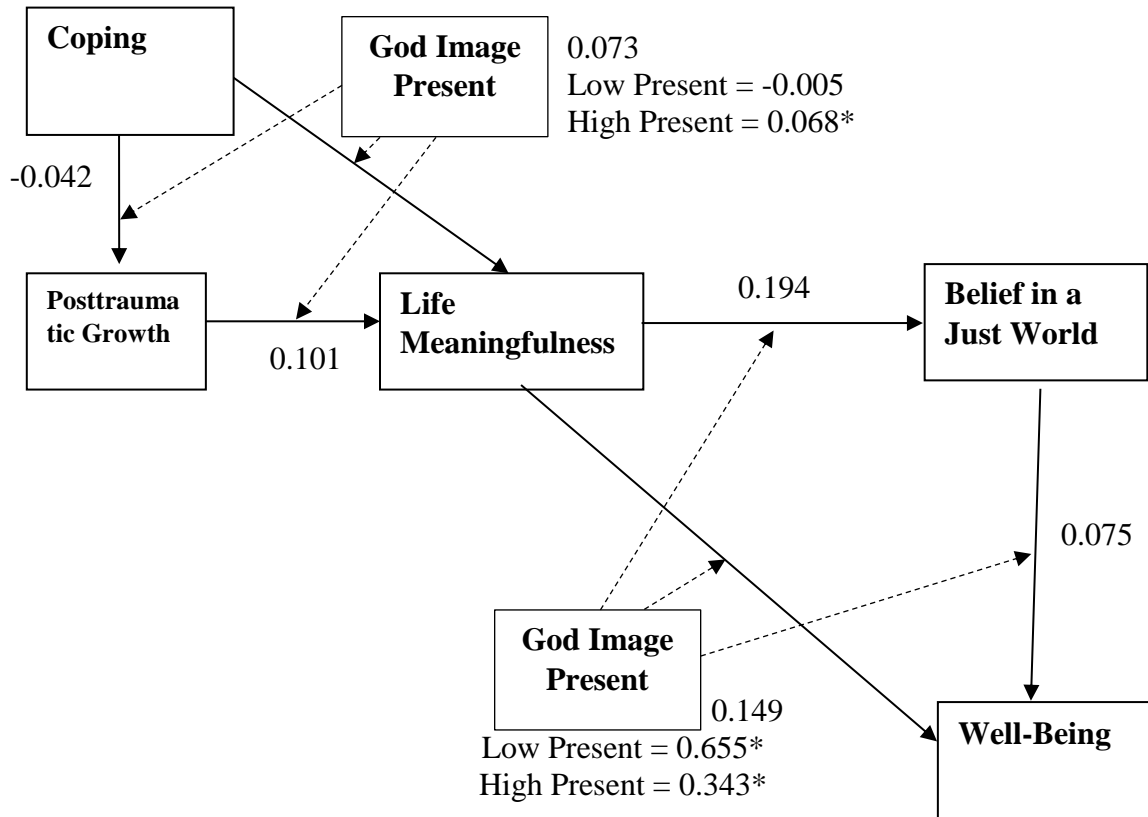


Figure 5. *The path model for the Present God Image.*

*Note:* Dashed lines indicate moderated mediation by the Present God Image. Next to the God Image variable is the Index of moderated mediation and its indirect effects at low and high levels of Present. \*95% Confidence Interval does not cross zero.

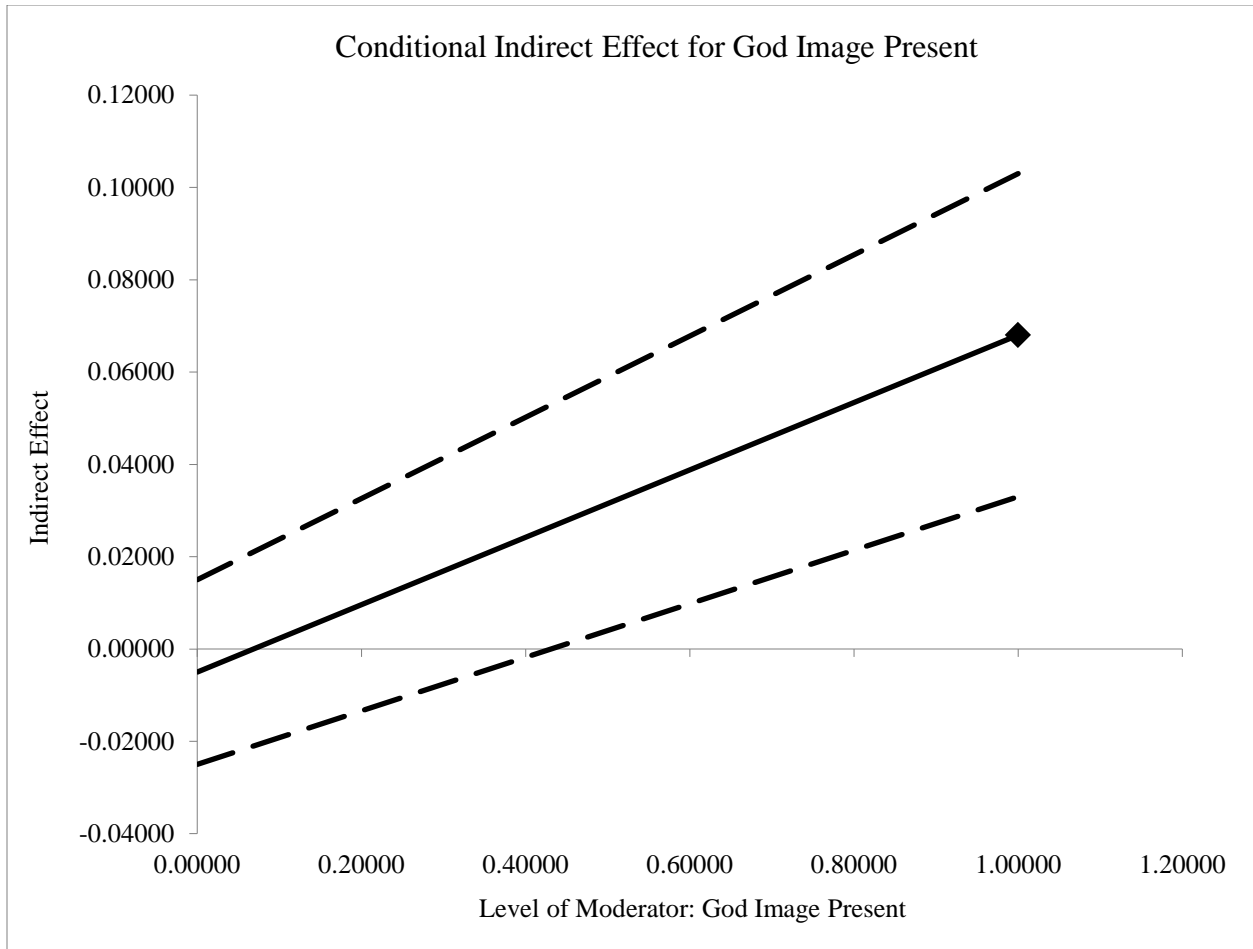


Figure 6. *Note:* The figure conveys the indirect effect of the God Image, Present, at scores lower than one standard deviation below the mean (zero) and higher than one standard deviation below the mean (one). This represents moderation of Posttraumatic Growth mediating Coping and Life Meaningfulness.

Belief in Just World did not mediate the relationship between Life Meaningfulness and Well-Being ( $b = -0.026$ , 95% bootstrap CI =  $-0.067, 0.007$ ). Interestingly, the God Image, Present, moderated the relationship between Posttraumatic Growth, Life Meaningfulness, and Well-Being. (Index =  $0.149$ , 95% bootstrap CI =  $0.001, 0.725$ ) See Table 8 for full results. The indirect effect of Posttraumatic Growth on Well-Being through Life Meaningfulness increases as a function of God as Present. The effect was significant at higher than average levels of the God Image, Present, but not at lower levels of the God Image. See Figure 5 and Figure 7 for visual representations of these effects.

Table 8. *Unstandardized OLS Regression Coefficients With Confidence Intervals (Standard Errors in Parentheses) Estimating Life Meaningfulness and Well-Being.*

	Belief in a Just World ( $M$ )			Well-Being ( $Y$ )	
	Coefficient	95% CI		Coefficient	95% CI
Life Meaningfulness ( $X$ ) $a_1$	-0.370 (0.461)	-1.281, 0.541	$c'$	0.655 (0.253)	0.154, 1.155
Belief in a Just World ( $M$ )			$b_1$	0.233 (0.175)	-0.113, 0.579
Present ( $W$ )			$b_2$	32.187 (15.668)	1.198, 63.176
$M \times W$			$b_3$	-0.344 (0.181)	-0.702, 0.015
Constant	75.222 (13.982)**	47.572, 102.873		1.105 (15.098)***	-28.757, 30.966
Index of Moderated Mediation				0.149 (0.178)*	0.001, 0.725
	$R^2 = 0.175$			$R^2 = 0.296$	
	$F(3,136) = 9.626, p < 0.001$			$F(5,134) = , p < 0.001$	

\*  $p < .05$ , \*\*  $p < .005$ , \*\*\*  $p < .001$

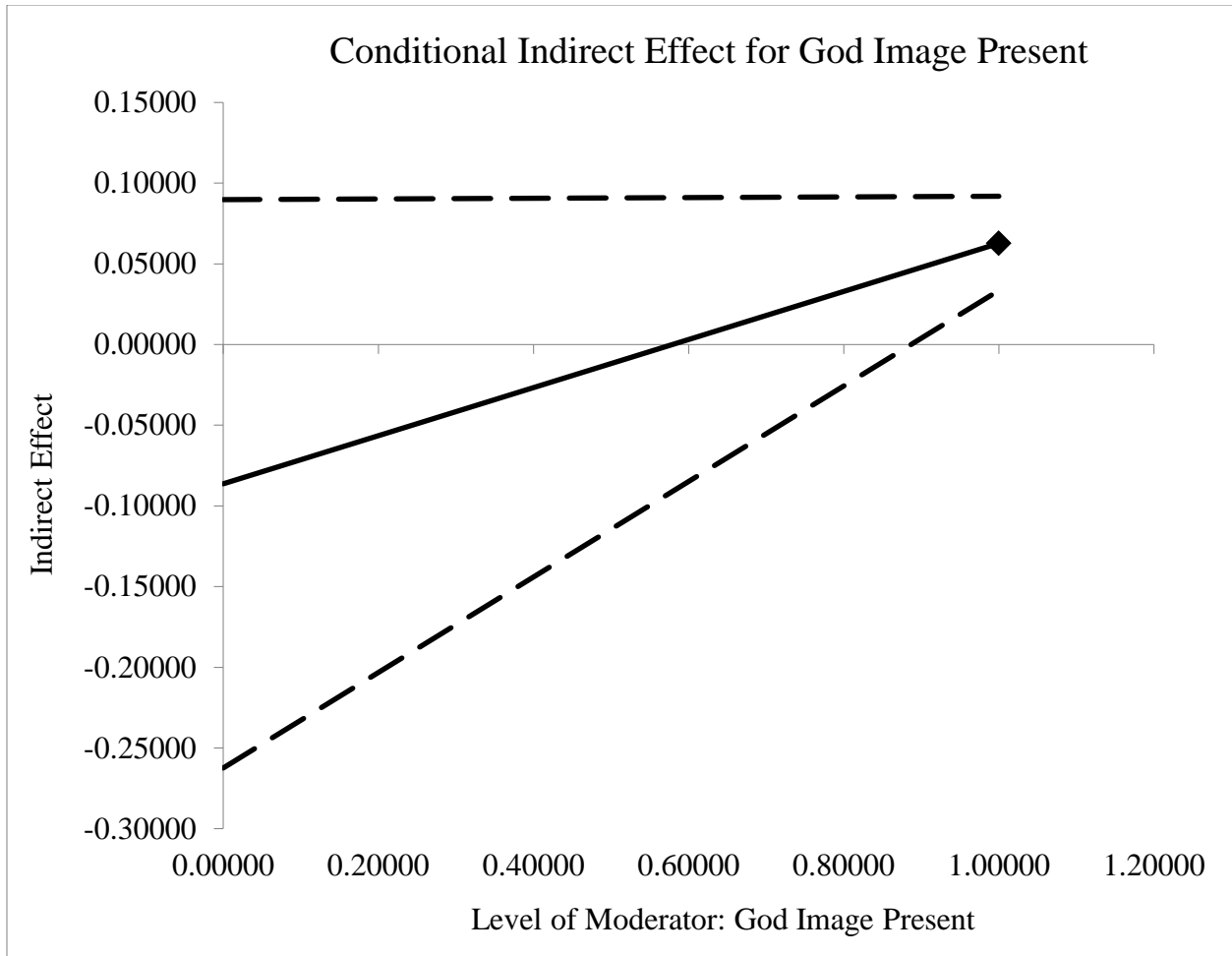


Figure 7. *\*Note:* The figure conveys the indirect effect of the God Image, Present, at scores below the mean (zero) and higher than the mean (one). This represents moderation of Belief in a Just World mediating Life Meaningfulness and Well-Being.

Results found that the God Image, Providence, appeared to moderate the relationship between Coping, Posttraumatic Growth, and Life Meaningfulness (Index = 0.067, 95% bootstrap CI = 0.000, 0.165). The indirect effect of Coping on Life Meaningfulness through Posttraumatic Growth increases as a function of God as bringing Providence. This relationship was significant only at high levels of the Providence God Image. Please see Table 9 for complete results and see Figure 8 and Figure 9 for visual representations of this effect.

Table 9. *Unstandardized OLS Regression Coefficients With Confidence Intervals (Standard Errors in Parentheses) Estimating Posttraumatic Growth and Life Meaningfulness.*

	Posttraumatic Growth ( <i>M</i> )			Life Meaningfulness ( <i>Y</i> )	
	Coefficient	95% CI		Coefficient	95% CI
Coping ( <i>X</i> ) $a_1$	0.061 (0.104)	-0.146, 0.267	$c'$	-0.164 (0.091)	-0.343, 0.015
Posttraumatic Growth ( <i>M</i> )			$b_1$	0.013 (0.219)	-0.420, 0.446
Providence ( <i>W</i> )			$b_2$	-22.528* (10.143)	-42.596, -2.460
<i>M</i> x <i>W</i>			$b_3$	0.477* (0.233)	0.017, 0.938
Constant	34.793 (6.765)***	21.409, 48.176		39.127 (9.576)***	20.182, 58.073
Index of Moderated Mediation				0.067 (0.043)*	0.000, 0.165
	$R^2 = 0.090$ $F(3,131) = 4.315, p = 0.006$			$R^2 = 0.327$ $F(5,129) = , p < 0.001$	

\*  $p < .05$ , \*\*  $p < .005$ , \*\*\*  $p < .001$

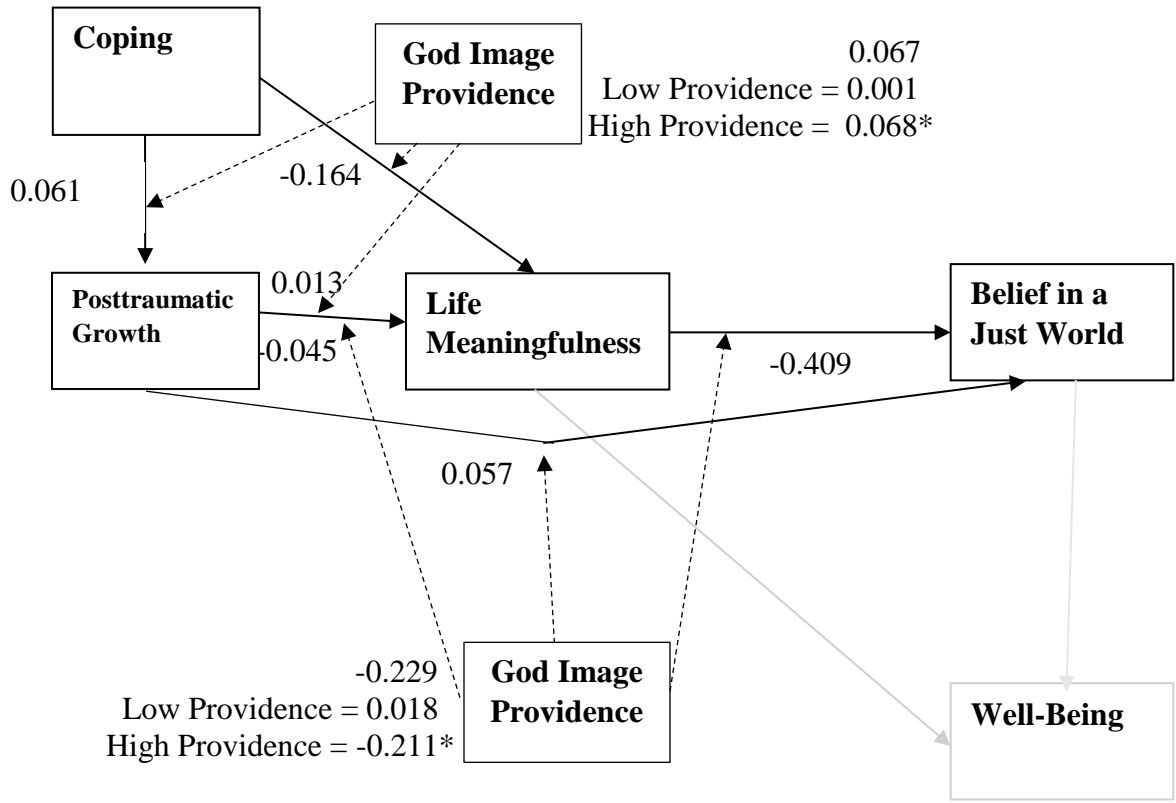


Figure 8. *The path model for the Providence God Image.*

*Note.* Dashed lines indicate moderated mediation by the Providence God Image. Next to the God Image variable is the Index of moderated mediation and its indirect effects at low and high levels of Providence. \*95% Confidence Interval does not cross zero.

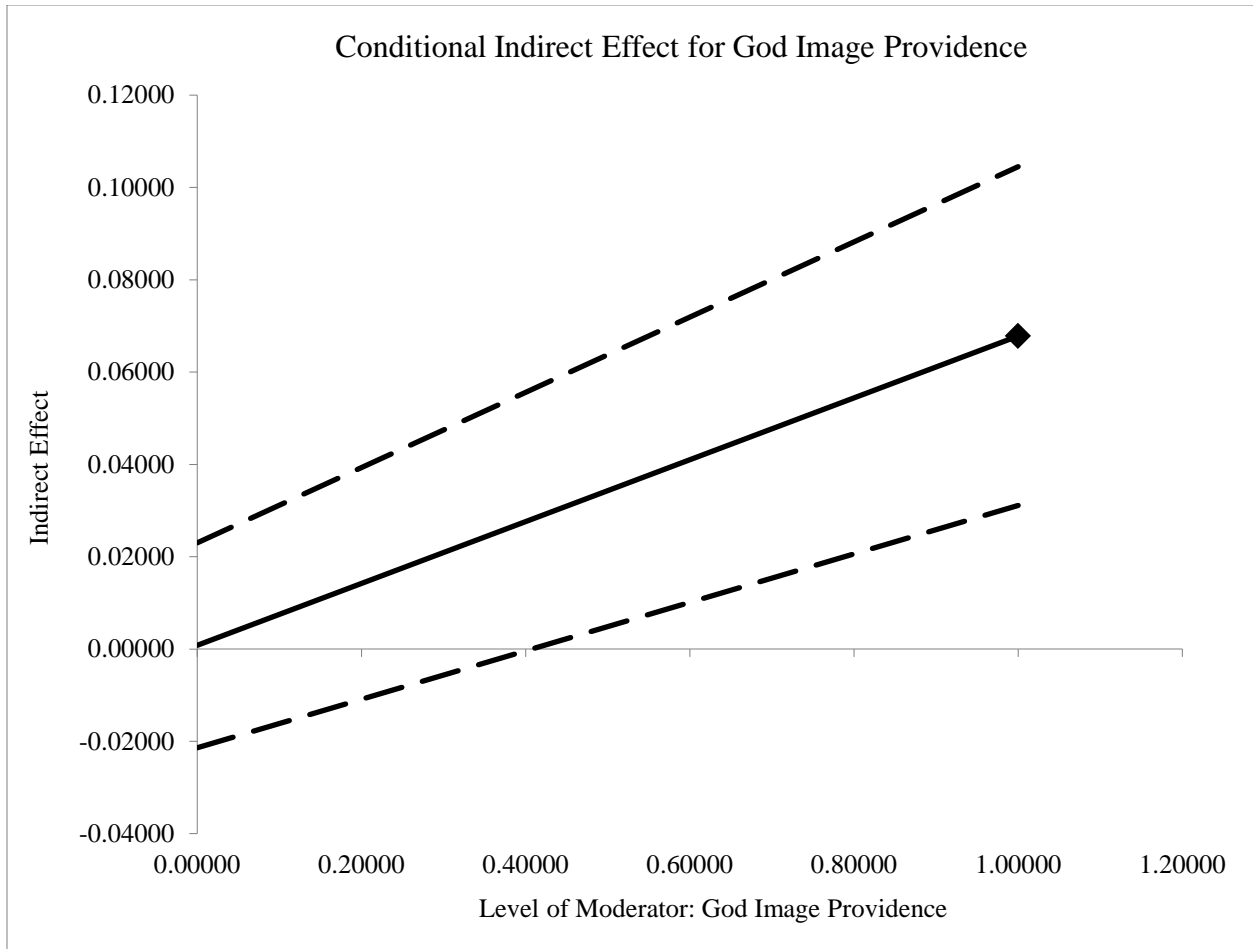


Figure 9. \*Note: The figure conveys the indirect effect of the God Image, Providence, at scores lower than one standard deviation below the mean (zero) and higher than one standard deviation below the mean (one). This represents moderation of Posttraumatic Growth mediating Coping and Life Meaningfulness.

Life Meaningfulness mediated the relationship between Posttraumatic Growth and Belief in a Just World. The God Image, Providence, moderated this relationship (Index = -0.229, 95% bootstrap CI = -0.554, -0.021). See Table 10 for more results. The indirect effect of Posttraumatic Growth on Belief in a Just World through Life Meaningfulness decreases as a function of God bringing Providence. The moderation effect was significant at high levels of the God Image, Providence. See Figure 8 and Figure 10 for visual representations of this effect.



Table 10. *Unstandardized OLS Regression Coefficients With Confidence Intervals (Standard Errors in Parentheses) Estimating Life Meaningfulness and Belief in a Just World.*

	Life Meaningfulness (M)			Belief in a Just World (Y)	
	Coefficient	95% CI		Coefficient	95% CI
Posttraumatic Growth (X) a <sub>1</sub>	-0.045 (0.230)	-0.500, 0.409	c'	0.057 (0.310)	-0.557, 0.671
Life Meaningfulness (M)			b <sub>1</sub>	-0.409 (0.480)	-1.357, 0.540
Providence (W)			b <sub>2</sub>	5.589 (19.598)	-33.186, 44.365
M x W			b <sub>3</sub>	-0.107 (0.495)	-1.086, 0.872
Constant	30.977 (8.975)***			76.278 (19.158)***	38.373, 114.184
Index of Moderated Mediation				-0.229, (0.157)*	-0.554, -0.021
	$R^2 = 0.229$ $F(3,131) = 12.980, p < 0.001$			$R^2 = 0.161$ $F(5,129) = , p < 0.001$	

\*  $p < .05$ , \*\*  $p < .005$ , \*\*\*  $p < .001$

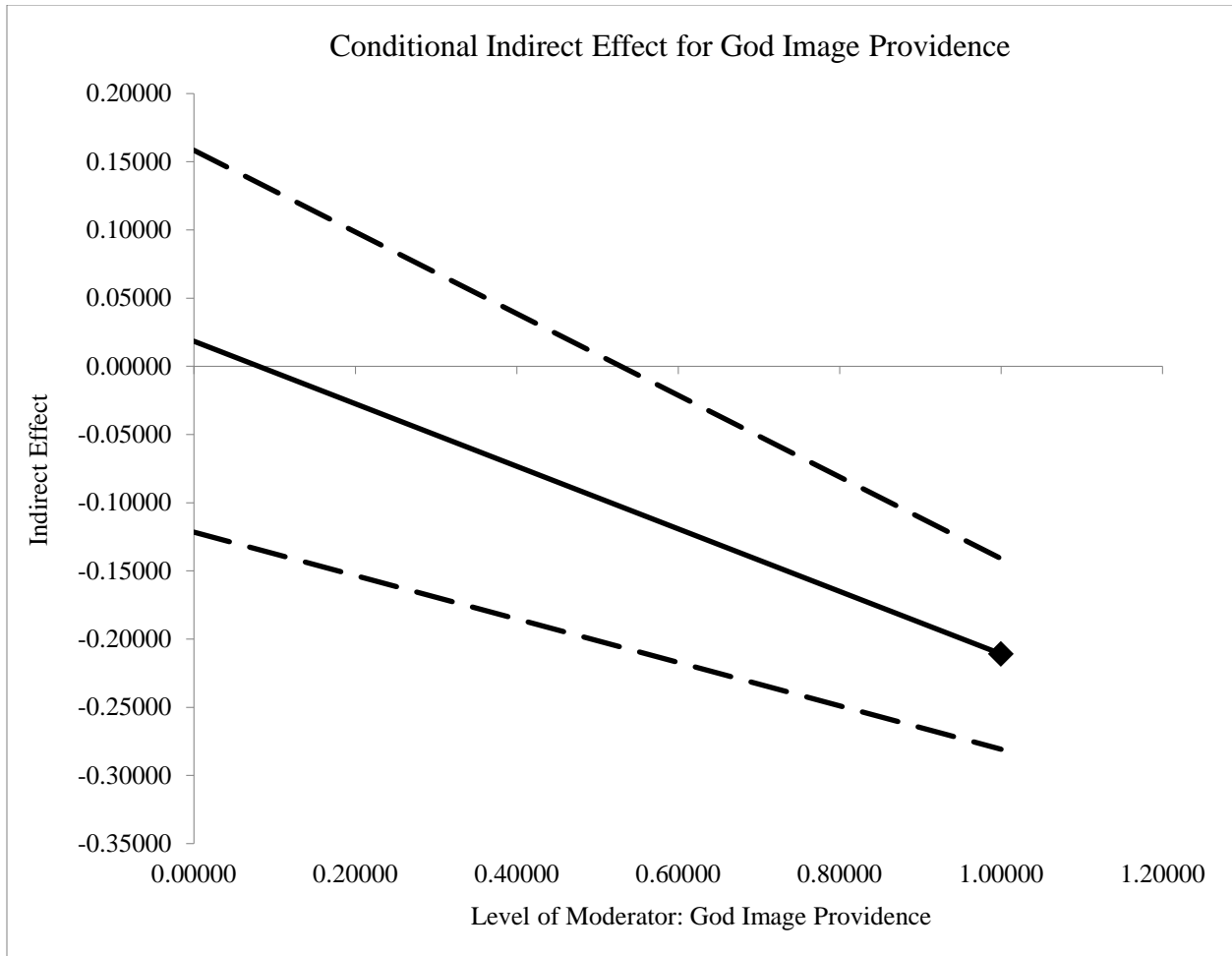


Figure 10. *\*Note:* The figure conveys the indirect effect of the God Image, Providence, at scores lower than one standard deviation below the mean (zero) and higher than one standard deviation below the mean (one). This represents moderation of Life Meaningfulness mediating Posttraumatic Growth and Belief in a Just World.

## DISCUSSION

The results suggest there are a number of thought-provoking relationships between the variables in Park and colleagues' (2008) meaning making model as they relate to God Images. The current path model appears to have accurately predicted the associations between the relevant variables. This study lends support to the utility of Park's (1997) meaning-making model, albeit with a few differences.

### **Differences between Path Models**

Most notably, the path model from this study suggests that Coping negatively predicts Life Meaningfulness, meaning the more positively a person reframes their beliefs, the lower they will rate their sense of Meaning. In contrast, Park and colleague's (2008) model demonstrates that Coping positively predicted Life Meaningfulness. There are a number of potential explanations accounting for this difference.

The sample in this study was comprised of participants, military and civilian, who endorsed acutely traumatic experiences whereas Park and colleague's (2008) study was strictly composed of cancer patients. One may consider the possibility that each population faces different existential questions and, therefore, may cope differently. For example, the cancer patients' experiences as civilians, while undoubtedly challenging, may have lent themselves to positively reframing more so than the acute trauma survivors. This is not to say, however, that cancer survivors have not experienced trauma due to their illness. Cancer patients are more likely to have a PTSD diagnosis than the general population (Swartzman et. al., 2016) and major illness qualifies as an acute stressor that can result in PTSD. This became clinically accepted with the publication of the DSM-IV (2001). It is also important to recognize that Veterans with

PTSD have higher rates of medical illnesses than the general population (Frayne, 2011), which suggests that participants in both studies may be coping with the effects of medical problems. It is possible, though, that this study's participants have experienced acute violence where the former study participants may not have. This could have contributed to greater difficulty in positive reframing.

Military Veterans may struggle with the impact of their trauma because of its repercussions for how they perceive others, the world, and perhaps God. One must consider if coping looks different between these populations because of inherent nuances in the types of trauma they have experienced; that interpersonal factors (military combat, assault) further complicate acute trauma in a way that a life-threatening illness does not. Research suggests that human-made problems are more likely to cause prolonged psychological harm or arousal than natural phenomena (Baum, 1987). Baum and Fleming (1993) suggested that this happens because people tend to expect more control over human-caused hazards than they do over natural disasters. People may not expect anyone to have control over natural processes, making negative events seem like minor violations of their beliefs compared to human-caused traumas. Kira et al. (2012) determined that different types of trauma have varied effects on survivors' cognitions, leading to dissimilar coping outcomes depending on whether they affected personal identity or had secondary impacts. Therefore, it is possible the contradictory relationship between Life Meaningfulness and Coping in this study resulted from the differences in trauma types between the samples.

Another factor to consider is the difference in scales used for this study. Park and colleagues (2008) did not use the Meaning in Life Questionnaire (MLQ; Steger et. al., 2006). Instead, they used the positive reframing subscale for the Brief COPE (Carver, 1997). That

subscale was comprised of two items, “Tried to see it in a different light, to make it seem more positive,” and “Looked for something good in what was happening.” In contrast, the MLQ consists of various items that more specifically addressed presence of meaning in its items, “My life has a clear sense of purpose” and “I have a good sense of what makes my life meaningful.” The Life Meaningfulness construct in this study very likely differs substantially enough from the previous one that it produced a different relationship with Coping. Although the relationship between Life Meaningfulness and Coping in this study appeared to change directionality, the relationship between Life Meaningfulness and Posttraumatic Growth and Well-being was consistent with the previous study.

The investigator performed an alternative path analysis, this time using the positive reframing subscale from the Brief COPE with the present study’s data to determine if it behaved differently as a Life Meaningfulness measure than it did in Park and colleagues’ (2008) analysis. The two variables were not significantly correlated ( $r = 0.021, p = 0.802$ ) and behaved differently in the model. The alternative path model revealed a significant positive relationship between Coping and Life Meaningfulness ( $b = 0.868, p < 0.001$ ), which is similar to the relationship between these variables in Park and colleagues’ (2008). This suggests that Life Meaningfulness behaved inversely in its relationship with Coping in the present study because the instrument used for Life Meaningfulness was substantially different from the instrument (two Brief COPE items) used by Park and Colleagues (2008). The relationship between the two Brief COPE items and Well-being in the alternative model was not significant and not comparable to either study. As expected, the relationship between Posttraumatic Growth and the two Brief COPE items in the alternative model was significant and positive ( $b = 0.676, p < 0.001$ ), which was consistent with both this and Park’s and colleagues’ (2008) study. The relationship between

Life Meaningfulness and Belief in a Just World was not significant and so was not comparable to either study. This was likely of little consequence because the present study, Park and colleagues (2008) both found significant negative relationships between Life Meaningfulness and Belief in a Just World. Replacing the two-item Brief COPE measure of Life Meaningfulness appeared to account for some change in the variable's contribution to the current path model compared to Park and colleagues (2008).

In the present study, Posttraumatic Growth significantly and positively predicted life Meaningfulness. This was consistent with Park's and colleagues' (2008) model and the association highlights the importance of developing posttraumatic growth as a means to finding meaning. Previous research using the SRGS (Park et al., 1996) has suggested that Posttraumatic Growth can manifest in a number of ways, such as greater social resources, more self-oriented resources, and new coping skills. The SRGS predicts optimism, positive affect, satisfaction with social support, and social support sources. Participants who experienced these benefits likely used them to inform their sense of Life Meaningfulness. Without asking participants individually, it is difficult to know the precise meanings they made, but the data show Posttraumatic Growth significantly predicts Life Meaningfulness and that it mediates the relationship between Coping and Life Meaningfulness in the path model.

### **Summary of Results**

The variables in the model generally related to each other as predicted. There was a significant relationship between Coping and Posttraumatic Growth, which supports hypothesis one. This result conforms to expectations because the cognitive process of Coping is a crucial step in the process of prompting Posttraumatic Growth. Specifically, a satisfying understanding

of a trauma can provide a foundation upon which survivors develop new resilient perspectives about their lives moving forward.

Results supported the second hypothesis as well, that Posttraumatic Growth mediates the relationship between Coping and Life Meaningfulness. Coping occurs early in the meaning-making process, when the survivor tries to interpret their experiences in a positive way. As survivors progress through effective meaning-making, they benefit from a strong sense of Posttraumatic Growth because it is a necessary step for one to effectively translate their reframing processes into Life Meaningfulness. It appears that Posttraumatic Growth is a vehicle for positive reframing (Coping) to inform Life Meaningfulness in post-trauma meaning-making systems.

There was a positive, significant relationship between Posttraumatic Growth and Life Meaningfulness, which supported hypothesis three. This association is unsurprising given these two variables appear to be very similar. According to the meaning-making model (Park et. al., 2008), Posttraumatic Growth is a precursor to Life Meaningfulness. Among trauma survivors, developing a sense of Life Meaningfulness can occur when they have come to a beneficial understanding of their traumas. Life Meaningfulness has a strong relationship with Posttraumatic Growth in other studies (e.g., Steger et. al., 2015). This suggests that positive changes after trauma can result in changes in the “hub” of meaning-making systems, Life Meaningfulness (see Figure 1). Simply put, people are more likely to have a sense of meaning if they report posttraumatic growth. Alternatively, lower endorsement of posttraumatic growth suggests lower levels of Life Meaningfulness; accordingly, previous work found that difficulty with meaning-making predicts distress and increases susceptibility to posttraumatic stress (Steger et. al., 2015).

The fourth hypothesis, that Life Meaningfulness mediates the relationship between Coping and Belief in a Just World, was not supported. There are a number of possible explanations for this. It is plausible that Coping predicts Belief in a Just World and that Life Meaningfulness does not significantly alter their relationship, but the simple mediation analysis did not support this, since the direct effect between Coping on Belief in a Just World was not significant ( $b = -0.003, p = 0.520$ ). Another idea is that Belief in a Just World, as a variable, is not nuanced enough to demonstrate a strong relationship with Coping. As noted earlier, Belief in a Just World could reflect a belief that one deserved their traumatic experiences. This take on the Just World Belief likely does not have the same relationship with Coping or Life Meaningfulness as a more positive take on a Just World would. The analysis found that Life Meaningfulness negatively predicted Belief in a Just World. Interestingly, this suggests that participants were less likely to Believe in a Just World if they endorsed higher Life Meaningfulness. It begs the question: How do people find their life meaningful if they do not believe the world is just?

One interpretation is that a person can conceive of Life Meaningfulness while rejecting the notion of a Just World. Their sense of Life Meaningfulness may actually be predicated upon the assumption that the world is not just. There are striking examples of people finding meaning in the midst of profound injustice. Viktor Frankl (1992), often credited with giving the field of psychology the impetus to explore meaning in life, endured the horrors of the holocaust and found meaning in hardship. Not only do people such situations find meaning in excruciating conditions, they do so with an understanding that the world is not just. It is entirely possible that participants in this study endorsed Life Meaningfulness and did not believe that the world is just. Perhaps Veteran participants survived trauma in warzones by acknowledging the injustices



around them and finding something for which they could still live as Frankl did. The fifth hypothesis further explores the relationship between the two variables.

The fifth hypothesis was supported as Life Meaningfulness mediated the relationship between Posttraumatic Growth and Belief in a Just World. This result, though predicted, might highlight a difference between Coping and Posttraumatic Growth. Posttraumatic Growth was positively correlated with Life Meaningfulness and, as stated before, Life Meaningfulness is negatively correlated with Belief in a Just World. Perhaps Posttraumatic Growth more effectively translates into Belief in a Just World than Coping does. This may occur because Posttraumatic Growth, a multi-faceted construct, might be more amenable to negative Just World Beliefs whereas Coping focuses singularly on positive reframing. While true that a positive outlook in the midst of hardships is an indication of Posttraumatic Growth, the concept of growth is versatile in that it can take account for a range of beliefs (i.e. social resources, personal resources, and coping skills).

Regarding the sixth hypothesis, there was a significant relationship between Life Meaningfulness and Belief in a Just World. Specifically, there was a significant, but negative correlation between the variables. Results did not support the second part of this hypothesis, that God Images would moderate the relationship. None of the God Images significantly moderated this relationship.

There were four instances, though, of moderated mediation using God Images as moderators: Providence moderated two relationships, Presence also moderated two relationships. Acceptance, Benevolence, Influence, and Challenging did not moderate any mediation analyses. Hypothesis seven proposed that kind and loving God Images would exhibit these effects. In part, this was accurate, as the two God Images that moderated these effects are loving and kind.

The God Image, Providence, moderated the relationship between Coping, Posttraumatic Growth, and Life Meaningfulness. People holding this God Image tend to believe that God is in control of their lives and that God will lead them to salvation in the midst of their trials. The moderation significantly affected the expression of Life Meaningfulness such that higher levels of Providence strengthened the relationship it had with Coping and Posttraumatic Growth. Providence seems to fit nicely within this framework. One can imagine that believing in God's saving power will nurture positive thoughts and a recognition of one's resources for growth. Those who hold God Images of Providence may have a sense of Life Meaningfulness based on perceived injustices that they hope or expect God to address. Therefore, they could reject notions of worldly justice in the interest of expecting divine justice. This is fitting because the Providence God Image carries themes of God being a shepherd, provider, manager, leader, and a fixer, whom believers trust to lead them.

Further, Providence feeds directly into a notion of Life Meaningfulness, which can attribute all happenings to being part of God's grand plan. Providence also significantly moderated the relationship between Posttraumatic Growth and Belief in a Just World through Life Meaningfulness. A complication of this finding was that higher levels of Providence actually predicted lower endorsement of Just World Beliefs. As noted before, people who believe in a Just World think the world is fair and that people get what they deserve. Those who hold the God Image, Providence, likely believe in a kind and generous God. One might consider that this notion of God is one who gives people more than they deserve. The present study did not explore beliefs regarding personal deservingness, which can stem from a number of complex religious and nonreligious beliefs, but this can be a useful direction for future research. It is understandable that trauma survivors endorsing high levels of Providence engage in

Posttraumatic Growth and develop Life Meaningfulness, but their belief systems may not conform or may even contradict a Belief in a Just World. Another possibility is that those endorsing high levels of Providence may make a distinction between a just God and a just world; specifically, they could believe that God is just and that they depend on God to help them navigate an unjust world.

The God Image, Present, moderated the relationship between Coping and Life Meaningfulness through Posttraumatic Growth at high levels of God as Present. Those who feel strongly that God is present with them tend to benefit from Coping leading to higher Life Meaningfulness via Posttraumatic Growth. God as Present may reinforce positive reframing strategies with Posttraumatic Growth serving as a powerful conduit to greater Life Meaningfulness. Perhaps perceptions of God's nurturing presence assisted trauma survivors in developing security and consistency as they engaged in building their social resources and developed new skills, which led to enhanced meaning-making.

The God Image, Present, moderated the relationship between Life Meaningfulness and Well-Being through Belief in a Just World at high levels of God as Present. This suggests that high Posttraumatic Growth, through Life Meaningfulness, led to higher Well-Being for those who had high levels of God as Present. This was expected as Present is a kind and loving God Image and was predicted to lead to greater Well-Being. The findings suggest that viewing God as Present enhances the effect of Life Meaningfulness on Well-Being via Belief in a Just World. That simple mediation was not significant without the God image, Present, is peculiar. This finding implies that mediation only occurs in instances where people strongly perceive God as present in their lives. Perhaps people who endorse a closeness with God are particularly more apt to believe in a just world and benefit from greater Well-Being. They might tie their

perception that God is present to all of their experiences of the world, in all matters mundane and magnificent. The perception of God as Present may permeate all aspects of their lives and may form their sense of Life Meaningfulness, with Gods presence as foundational. Perhaps this offers people assurance in good and challenging times, the effect of which leads to positive attitudes and serves as a protective factor against depression and anxiety. Perhaps other complexities exist in the ways these variables relate to each other. Clearly, the intricacies of this relationship require further exploration.

### **Research Implications**

The results of this study give rise to numerous questions about the meaning-making process for different populations. One direction for future research involves comparing path models between religious traditions or between religious and non-religious groups. This would require more participants than this study used in order to have adequate statistical power to find meaningful relationships between the variables. Such a study could be more generalizable to the greater population. Future research involving God Images may focus on whether different groups endorse more challenging-type God Images than others. Recruiting a more religiously diverse sample could allow for more representation among the other God Images and add richness to our understanding of meaning-making in the context of religious beliefs.

Future research could examine if cultural factors also explain differences in God Images. Hoffman and colleagues (2008) found differences in God Images based on ethnic background. Their results suggested that childhood church attendance for ethnic minorities was predictive of them endorsing the Benevolent God Image. The same was not true for white participants. Beyond differences among ethnic groups, another angle researches could take would involve creating new God Image scales tailored to measure people who do not hold a monotheistic view

of God. Schrieber (2011) called for more investigation into this issue as a means to gain a nuanced understanding of people's belief system in recovery from breast cancer. A new scale might also allow participants to more flexibly view this relationship with the divine if it phrases the items with a consideration of the divine that more accurately aligns with their beliefs. Those who do believe in a monotheistic God could explore God Images in a number of different ways.

Future research might specifically examine the role of God's control in a person's life. Maynard and colleagues' (2001) findings that deferring control of one's life to God is related to a positive God image likely ties into larger themes of power and control in the context of trauma recovery. Power and control are common themes in therapy with trauma survivors and the inclusion of God's role may produce a richer understanding of how they inform recovery. Other themes may include strengths and resources, which relate to posttraumatic growth. Future research could specifically focus on the ways in which people count their resources during the coping process. Maynard and colleagues (2001) found that God Images were strongly related to how people gauge their resources to cope with challenging events. It would be interesting to ask participants to identify their sources of support, whether they are concrete or abstract sources of support, and how helpful they may be.

Future research may also further clarify Just World Beliefs. One major clarification would mean accounting for "loopholes" people may have created in their conception of a Just World, some of which may have occurred in this study. For example, people endorsing strong religious beliefs may not necessarily believe that the world is just but may hold ideals of ultimate justice as part of their belief systems: They recognize that they might not see justice immediately or even during their lifetime, but they can ultimately expect justice from God. Trauma survivors might also endorse skewed perceptions of a Just World depending on whether they or others are

subject to negative outcomes. This is based on Aten and colleagues' (2008) finding that Hurricane Katrina survivors were more likely to see God as a judge if God's judgment is dispensed on others rather than themselves. There is also a possibility that religious tradition and mental illness influence how people think they ought to feel about God, even if their personal feelings do not reflect their beliefs. For example, Eurelings-Bontekoe and colleagues (2005) found that psychological distress mediates the relationship between low self-esteem and negative feelings toward God. They noted that Orthodox reformed church members may hold a negative concept of God but may not struggle with this because they may share a negative God concept with members of their social networks. Jonker and colleagues (2007), who investigated feelings towards God, found a large discrepancy between personal and normative positive feelings towards God among Orthodox Christians and psychiatric patients. The discrepancy was smaller for Mainline Protestants, Catholics, and Evangelicals. Taken further, these findings could suggest that it is possible for people to hold ideals about a just God while personally holding negative feelings towards God. In this way, people may subscribe to belief systems about God's benevolence and justice but still struggle in their personal relationship with God. Nuanced measures of religious identity and psychological distress could lead to a better understanding God Images. Ultimately, an updating of some of the measures used in this analysis can provide a more inclusive picture of their contributions to meaning-making.

The Well-Being scale in this study assessed both mental and physical health outcomes. Future researchers may also consider using multiple well-being measures to distinguish between mental health, physical health as there may be interesting dynamics they each contribute to the meaning-making model, and investigators may want to learn more about mental and physical wellness independent of one another.

Alternatively, researchers may examine the meaning-making model with a specific focus on goals. Recent work has incorporated goals into the meaning-making model. Specifically, Park (2008) found that trauma leads to violations of survivors' goals, triggering distress. Taken further, Steger and colleagues (2015) suggested that violation of goals might be a stronger predictor of Posttraumatic Growth than a violation of beliefs. Future research might examine how goal disruption specifically ties into religious belief systems and influences outcomes for trauma survivors.

### **Clinical Implications**

The present study's findings can extend in many ways into clinical settings. Some of the findings speak to the importance of God Images as they relate to meaning-relevant variables among trauma survivors. For many people who hold Providence or Present God Images, clinicians may assess their coping skills, Posttraumatic Growth, Life Meaningfulness, Belief in a Just World, and Well-Being. Clinicians might also develop awareness of nuances in Providence and God as Present, noting that their clients may experience well-being very differently, depending on whether their endorsement of the God image is very high or not. Generally, the effects of the God images were substantial when people endorsed them at high levels. Clients' endorsement of these God Images may inform how clinicians assist clients in exploring the kind of meanings they are making and how they influence their expectations of justice from others, the world, and for God. In essence, the meaning-making model can serve as a guide for people who are recovering from trauma. It can be used as a visual aid to help clients understand coping and the meaning-making process.

God Images relate to one's perceptions of resources to handle stressful situations, which is crucial in the coping process, specifically in secondary appraisals (Maynard et. al. 2001). An

assessment of God Images may serve clinicians well, especially as it pertains to their perceptions of God being in control. Because viewing God as in control is associated with a positive God Image, it would be worthwhile to explore themes of control within survivors' belief systems. Beyond its importance for research, the relationship with God itself may be a good place for clinicians to work with clients on improving their mental health. Loving God Images coincide with a positive mood (Wiegand & Weiss, 2006). Positive God Images also lead to more effective coping and health benefits than negative God Images (Aten et. al., 2008). If clients are able to highlight some positive aspects of their relationship with God, clinicians may challenge them to identify the effects this has on their thoughts, emotions, and behaviors. Of course, clinicians ought to do this without imposing their own ideas of a positive God Image on their clients. Clinical work involving God Images must include tactful exploration and take place in the context of a safe and strong therapeutic relationship. Another potential direction for clinical work might explore their clients' role in their relationship with God.

Much of the research highlighted thus far has focused on how God is viewed in relationships with trauma survivors. Clinicians may be uniquely suited to explore the ways in which their clients think and behave in their relationships with God. Although some clinicians may be tempted to use clients' relationship with God as a barometer for how clients function in other relationships, they should reconsider doing so, given research on the unique aspects of relationships with God. For religious participants, their relationship with God affects their emotions independent of their disposition towards others or themselves (Exline et. al., 1999). Notably, anger at God is associated with worse mental health and less effective coping (Exline et al., 1999) and people who have difficulty forgiving God are more likely to experience anxious or



depressed moods. Notably, this was true regardless of the person's propensity to forgive themselves or others.

Clinicians can also apply some of the findings of this study to work with their clients to help them engage in activities that foster Life Meaningfulness and Posttraumatic Growth. To address this in therapy, clinicians may help clients to identify sources of meaning and purpose and encourage them to participate in activities they find meaningful. They can also refer clients to other trauma survivors who have themselves engaged in Posttraumatic Growth. A therapeutic emphasis on growth-related cognitions may be prove fruitful for clients.

Clinicians would be wise to help clients identify specific beliefs about God so they can learn how they translate into Coping, Posttraumatic Growth, Life Meaningfulness, Belief in a Just World, and Well-Being; noting that belief systems can be unique and nuanced. They might also work in therapy to develop goals and discuss whether those goals demand resolution.

### **Limitations**

There were some notable limitations throughout this study. Among them was the difficulty acquiring a homogenous sample of Military Veterans. Because fewer than 100 Veterans participated in the study and the original study used 175 participants, more were needed to have adequate statistical power. The statistical consultation suggested that this study meet or exceed the amount of participants of Park's and colleagues' (2008) original study. That, combined with the intent to observe changes in the data based on selection of God Images, made it imperative that the investigator obtain more data for the study, leading to a more heterogeneous sample.

Because the study intended to examine the path model among Military Veterans due to their traumatic experiences, the investigator decided to obtain data from students who also had

traumatic experiences. A total of 100 participants were requested from the Psychology research pool and were selected based on having the highest PTSD Checklist (PCL) scores. Veterans Administration guidelines recommend using a score of 35 as a criterion for suggesting that a person likely has PTSD. This study used 34 as a criterion to accommodate enough student participants to match the number of Veteran participants. Though only one point lower, this and the necessity of using data from a different sample might have given an altered picture of how meaning-making happens; the data may have been skewed by participants whose trauma was not as prominent as expected at the study's onset. Interestingly, the possibility of differences in trauma did not appear to affect endorsement of growth, as the average score for Posttraumatic Growth among the Veterans was close to the average Posttraumatic Growth score among students.

Along with the possibility of varied trauma among participants, there were also some difficulties presented by religious beliefs, or lack thereof, as identified by participants. Some participants stated that they did not believe in God or that their concept of God did not fit the items of the GIS. This represented a challenge for participants as their beliefs were not represented by the monotheistic notion of God upon which the GIS was based.

The investigator received multiple emails from participants who expressed concern about this. They were encouraged to answer to the best of their abilities and were allowed to skip items that they could not truthfully answer. This resulted in missing data for some participants on the GIS. The investigator did not omit participants based on their missing data and encouraged all of them to answer as many items as they were comfortable answering because some participants who identified as atheists or agnostics may have not believed in God because of incidents that instilled disappointment or anger towards God (Exline et. al., 2009). If this

were the case, they may still have ideas about a relationship with God. It is possible that the God Images they chose did not reflect their true beliefs, which could have resulted in inaccurate data. The investigator attempted regression imputation to account for missing data and provide a close estimate for these participants, although this was not deemed useful as results proved similar without the imputation. Novel ways of assessing God images may assist researchers in ensuring higher response rates among their participants.

Future investigators might also consider an alternative way to measure God Images, as suggested for future directions in research. This is because the GIS, while covering many God Images, does not provide many opportunities to measure difficult relationships with God, which may be especially prominent among trauma survivors.

Finally, the study was also limited by its cross-sectional design, which prohibited the investigator from establishing temporal causality in the model. Future research may examine the meaning-making model in a longitudinal study. This would help to establish the sequence of events in meaning-making and the lingering or impermanent effects of God Images. The present study, while building off previous research, does not provide such insight.

### **Conclusion**

The present study uncovered relationships between God Images and components of Park and colleagues' (2008) meaning-making model. Some of the relationships behaved as expected. This study's meaning-making model generally paralleled Park and colleagues' (2008) meaning-making model. God Images interacted with components of this model through moderated mediation in four instances, with the Present and Providence God Images playing prominent roles. The Present God Image performed as expected, moderating the relationship between Coping, Posttraumatic Growth, and Life Meaningfulness. Providence also moderated this

relationship. Providence appeared the most relevant God Image for the meaning-making model as it moderated two separate mediation analyses. As expected, high endorsement of the Present God image moderated the mediating role of Belief in a Just World on Life Meaningfulness and Well-Being. Future research would benefit from examining the meaning-making model in light of cultural diversity, polytheistic religious beliefs, refined understandings of God's control, examining the role of goals, and taking a closer look at Belief in a Just World and Well-Being. Clinicians may refer to this study to use the meaning-making model as a visual aid for clients struggling with trauma. They may focus on clients' attribution of control in the context of their traumatic experiences. Using God Images, clinicians may also explore facets of their clients' relationships with God in therapy. Finally, clinicians can encourage clients to engage in activities that promote Life Meaningfulness and foster Posttraumatic Growth.

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