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PATHS FROM SPIRITUAL SUPPORT TO COLLEGE SELF-EFFICACY

by

Mollie Dianne Kaye Carter

A Dissertation

Submitted in Partial Fulfillment of the

Requirements for the Degree of

Doctor of Philosophy

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Abstract

College students undergo identity development in emerging adulthood, including adjustments in relationships, exploration of occupations, and revisions of spiritual worldviews (Arnett, 2000). Using a modified portion of Lent's (2004) normative model of life satisfaction, this study sought to construct a moderated mediation path to assess the role spiritual models play in college students' developing traits of spirituality, mindfulness, forgiveness, and hope, and the associations these traits had with college self-efficacy. Additionally, this study proposed perspective-taking as a moderator of the association between environmental support from spiritual models and spirituality, mindfulness, forgiveness, and hope, such that college students high in perspective-taking would understand and internalize traits of models rather than only imitating the spiritual practices of the model. Participants (n = 384) in this one-time survey study were recruited from a public, urban university and a private, Christian university. Participants responded to the following inventories: Spiritual Modeling Inventory of Life Environments (SMILE), Assessment of Spirituality and Religious Sentiments – Short Form (ASPIRES), Cognitive and Affective Mindfulness Scale, Revised (CAMS-R), Heartland Forgiveness Scale (HFS), The Hope Scale, Perspective-Taking subscale of the Interpersonal Reactivity Index, and the College Self-Efficacy Inventory (CSEI). Results of the moderated mediation paths show spirituality, mindfulness, forgiveness, and hope mediated the association between environmental support from spiritual models and college self-efficacy, but perspective-taking did not moderate associations from environmental support from spiritual models to the mediators. These findings supported the modified portion of Lent's (2004) normative model of life satisfaction which states that environmental support, including support given by spiritual models, enhanced the

development of healthy traits such as spirituality, mindfulness, forgiveness, and hope. In turn, the healthy traits were associated with increased college self-efficacy.

Table of Contents

Chapter Page

List of Figures viii

Chapter 1: Introduction 1
Theoretical Framework 2
College Self-Efficacy 4
Environmental Support 6
Traits and College Self-Efficacy 10
Spirituality. 10
Mindfulness. 12
Forgiveness. 14
Hope. 16
Perspective-Taking as a Moderator 19
The Current Study 20
Chapter 2: Method 22
Participants 22
Procedure 23
Measures 24
Environmental support from spiritual models. 25
Spirituality. 26
Mindfulness. 27
Forgiveness. 27
Hope. 28
Perspective-taking. 28
College self-efficacy. 28
Analysis 29
Chapter 3: Results 30
Missing Data Analysis 30
Mediation Analyses 34
Spirituality as a mediator. 34
Mindfulness as a mediator. 35
Forgiveness as a mediator. 36
Hope as a mediator. 37
Moderation Analysis 40
Chapter 4: Discussion 42
Spirituality 42
Mindfulness 43
Forgiveness 45
Hope 47
Perspective-taking as a Moderator 48
Chapter 5: Conclusions 50
Implications 50
Limitations and Future Directions 51

References 55
Appendix A 70
Appendix B 82
Appendix C 84

List of Figures

Figure	Page
Figure 1: Lent's (2004) Contributions of personality, affective, and social cognitive variables to well-being under normative life conditions.	4
Figure 2: The hypothesized path from spiritual modeling to college self-efficacy.	21
Figure 3: Mediation Path: Spirituality.	35
Figure 4: Mediation Path: Mindfulness.	36
Figure 5: Mediation Path: Forgiveness.	37
Figure 6: Mediation Path: Hope.	38

Chapter 1: Introduction

Emerging adulthood is often experienced as a psychological moratorium characterized by self-focused individualism, instability, and risk-taking (Arnett, 2000). During this moratorium, emerging adults are expected to make adjustment in social relationships, worldview changes, and work (Arnett, 2000). The current research focused on the impact of social relationships in the context of spiritual community (i.e., environmental support from spiritual models) for the development of traits that enhanced college self-efficacy among college students.

In 2017, approximately 59% of students in the United States enrolled in college full-time after high school (Bureau of Labor Statistics, 2018). For these individuals, college becomes the work of their early emerging adulthood. College students need to reorganize their social networks, such as negotiating autonomy and interdependence with parents, managing roommate relationships, developing relationships with university faculty and staff, and forming a new sense of community for themselves by engaging in extra-curricular activities and spiritual communities inside or outside the university (Arnett, 2000; DeFreitas & Bravo, 2012; Solberg, O'Brian, Villareal, Kennel, & Davis, 1993). These social transitions can shape college students' self-beliefs, self-evaluation of social skills, grade point average, and intent to persist (Gore, 2006; Gore, Leuwerke, & Turley, 2005; Solberg et al., 1993). New relationships formed during college, such as those with peers, staff/faculty mentors, and individuals in spiritual communities may become new and important sources of information or advice, which may lead to revision of one's worldview, especially in a spiritual sense (Arnett & Jensen, 2002).

It is common for emerging adults to revise or abandon spiritual beliefs (Arnett & Jensen, 2002), but absent is the literature that determines what college students may either gain by engaging or lose by disengaging with spiritual models is absent. Drawing on part of Lent's

(2004) cognitive, affective, and social cognitive model of normative life satisfaction, this study tested a mediation path involving environmental support from spiritual models (Oman, Thoresen, Park, Shaver, & Hood, 2009), traits that may be acquired by observing and imitating a spiritual model, and college self-efficacy (Solberg et al., 1993). Spiritual models are individuals engaged in spiritual modeling by being available to a learner and impacting that learner through attention, retention, and motivation (Oman et al., 2009). The impact of environmental support from spiritual models may lead the learner to develop a group of important traits: spirituality, mindfulness, forgiveness, and hope. Spirituality is the combination of spiritual transcendence and religious involvement (Piedmont 2001; 2009). Mindfulness is non-judgmental, non-reactive awareness of the present moment (Bishop et al., 2004; Kabat-Zinn, 1994). Forgiveness is changing negative emotional states to neutral or positively valence emotional states toward others, situations, and oneself (Thompson et al., 2005). Hope is thinking that one's goals can be attained (Snyder et al., 1991). According to the proposed model, the group of trait variables were associated with the outcome variable, college self-efficacy, or belief in one's ability to perform academically and interpersonally in college (Solberg, O'Brien, Villareal, Kennel, & Davis, 1993). Finally, perspective-taking, the perceived ability to infer and/ or consider the point of view of another person (Davis, 1983), was introduced as a cognitive moderator qualifying the associations among the explanatory, mediating, and response variables.

Theoretical Framework

According to Lent's (2004) normative model of life satisfaction, some major variables contributing to overall life satisfaction include environmental supports and resources, personality traits and affective dispositions, and self-efficacy (see Figure 1 for Lent's complete model). In the initial model, personality traits and affective dispositions are theorized to predict

environmental supports and self-efficacy, which then predicts life satisfaction through other mediators. However, empirical data suggest possible ways to modify the model in terms of the sequence of the variables. While environmental support indeed predicts self-efficacy, it also predicts positive affect (an example of personality traits) rather than the opposite; positive affect then presents a bidirectional association with self-efficacy (Lent, Singley, Sheu, Schmidt, & Schmidt, 2007). According to Lent (2007), it is plausible that environmental support may nurture self-efficacy through development of healthy traits and positive affect.

These findings support Lent's et al. (2005) argument that students will be satisfied when their environments are perceived as supportive, and students are more likely to report satisfaction when they are acting on valued goals and maintaining a positive sense of self-efficacy. Considering the breadth and empirical support already demonstrated for Lent's (2004) model of normative life satisfaction, this study narrows the model to test three groups of variables, each with a more specific focus than what Lent initially proposed. The study tested the role of having spiritual environmental supports (i.e., spiritual models), and tested traits that are more modifiable than those previously studied and thus can be learned through modeling, and utilized college self-efficacy, a domain-specific efficacy variable, as an outcome.

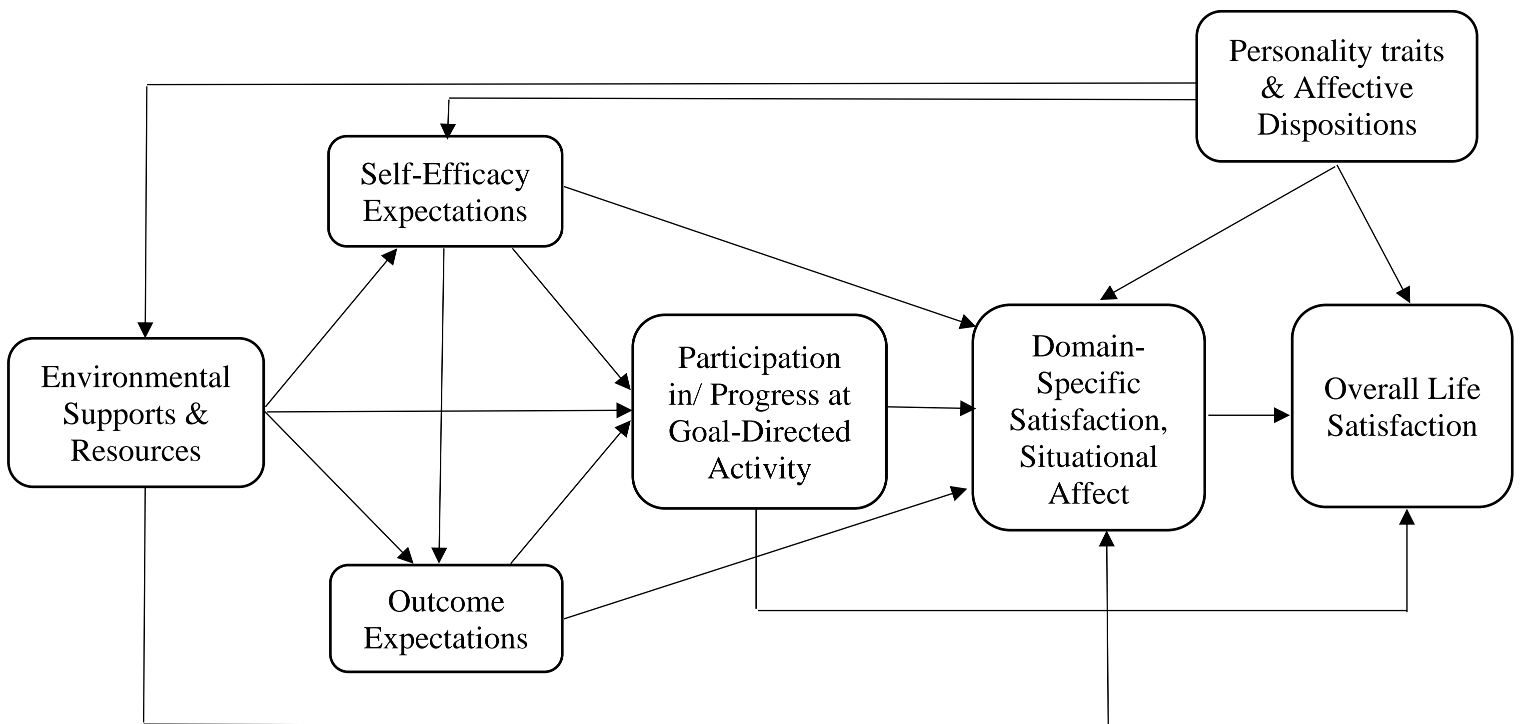

Figure 1. Lent's (2004) Contributions of personality, affective, and social cognitive variables to well-being under normative life conditions.

College Self-Efficacy

According to Solberg, O'Brien, Villareal, Kennel, and Davis (1993), college students may possess the skills necessary for academic or social success, but unless they believe they can use the skills in a way that will resolve conflict or manage academic tasks, her or his skills may not be utilized effectively in coping with new challenges in college. Therefore, college self-efficacy is described as a college student's beliefs regarding three domains: satisfactory performance in courses, effective interactions with roommates, and effective social interactions not having to do with roommates (Solberg et al., 1993). Course self-efficacy is similar to other measures of academic self-efficacy in that it addresses the student's perceived ability to research and write papers, perform well in class and on exams, and manage time and work (Solberg et al., 1993). Roommate self-efficacy specifically focuses on a student's perceived ability to engage in

positive interactions with roommates and divide space and room maintenance tasks between roommates. Finally, social self-efficacy encompasses perceived ability to interact with professors, staff, peers, potential romantic partners, and to participate in extra-curricular activities (Solberg et al., 1993); this social self-efficacy contributes to confidence in using the library, interacting with faculty, making friends, and participating in extracurricular activities (Brady-Amoon & Fuertes, 2010). Solberg et al. (1993) indicate that distinguishing between social and roommate self-efficacy is important for reliably assessing adjustment in college, but that together, they can serve as an indicator of overall interpersonal self-efficacy, reflecting one's general social integration in the college setting.

College self-efficacy plays a major role in academic success and persistence in college. Academically, both the course and interpersonal aspects of college self-efficacy have been associated with grade point average (GPA; Brady-Amoon & Fuertes, 2010) and credits earned during freshman year (Zajacova, Lynch, & Espenshade, 2005). Longitudinal studies have found that college self-efficacy at the beginning of freshman year is not associated with positive outcomes, but when self-efficacy is measured at the end of the first semester, it is predictive of GPA into the third semester of college (Gore, 2006; Gore et al, 2005). In spite of academic struggles during freshman year, college self-efficacy may have a role in predicting persistence into the second year of college. Zajacova et al. (2005) report the academic aspect of college self-efficacy is not associated with persistence although total college self-efficacy is associated with intent to persist (Baier, Markman, & Pernice-Duca, 2016), which may indicate that for some students, factors unrelated to grade point average impact the decision to persist rather than to drop out (Zajacova et al., 2005). A subsequent longitudinal study of college self-efficacy indicates that it is the interpersonal measures of college self-efficacy that are most associated

with persistence into year two of college (Gore, 2006), and this study also mirrors the findings of Gore et al. (2005) that college self-efficacy at the end of the first semester is more predictive than self-efficacy measured at the beginning of the first semester. Since mastery experiences are considered to be the most salient source of self-efficacy (Bandura, 1977), it is possible that college freshmen assessed at the beginning of the semester are not able to accurately report what they believe about their performance due to lack of mastery experiences (Gore, 2006). Given the importance of college self-efficacy in predicting students' GPA and intent to persist past the first year of college (Gore et al., 2005; Gore, 2006), this study focused on it as the outcome variable. Further, because the impact of college self-efficacy typically does not emerge until late in the first semester (Gore et al., 2005; Gore, 2006), in the current study, data was gathered in courses with predominately second semester freshmen, sophomores, juniors, and seniors will occur at any point during the semester, and data gathering in courses involving predominately first semester freshmen will occur during the last month of the semester.

Environmental Support

According to Lent (2007), environmental support may nurture self-efficacy through development of healthy personality traits. In his model, environmental support includes individuals who encourage, serve as coping models, and provide guidance. However, specific ways in which environmental support increases self-efficacy is not expounded upon other than to say that affective and value based mediators work best when they are culturally relevant (Lent, 2004). Exploring what kind of environmental support college students may have, such as support from spiritual models (Duffy & Lent, 2008; Oman et al., 2009), can clarify which personality traits are associated with college self-efficacy (Solberg et al., 1993).

Bandura (1977) identified four factors that develop self-efficacy: mastery experiences, verbal persuasion, vicarious experiences, and emotional arousal. Mastery experiences is a solitary factor, consisting of past exposure and desensitization as well as self-instruction and self-modeling (Bandura, 1977). The other three factors, vicarious experiences, verbal persuasion, and emotional arousal, involve the input of others (Bandura, 1977). Vicarious experiences impact self-efficacy through live modeling and symbolic modeling (Bandura, 1977). Live modeling refers to observing and interacting with individuals face-to-face as the models encounter challenges; symbolic modeling refers to the use of stories, perhaps of significant figures in the past, to learn precepts for behavior in a variety of situations. Learners can observe others cope with difficult situations and may believe that they too can overcome obstacles to success, but observing struggle and effort is more important than observing someone do well at something they are known to be good at (Bandura, 1977). Additionally, it is important for learners to observe the specific gains that come from the effort rather than simply to know that good things occurred, and the more models an individual has that model similar behaviors in challenging situations, the more likely self-efficacy is to increase (Bandura, 1977).

Verbal persuasion involves an individual encouraging another person that they are able to perform well, the learner using ability-related self-talk to encourage oneself, or the other person and/or learner providing alternative interpretations of events (Bandura, 1977). Encouragement provided by someone who does not understand the tasks or environmental conditions faced by the college student, or encouragement that is not supported by mastery or future experiences may not be taken seriously, indicating that verbal persuasion is limited in its ability to increase self-efficacy (Bandura, 1977). However, when the persuader convinces the learner that they have the skills or predispositions to master situations and provides opportunities to use or develop these

skills prior to the difficult situation, the interactive effects may increase self-efficacy (Bandura, 1977). Finally, if the learner has models who demonstrate the use of coping skills for managing challenges, emotional arousal can be managed socially in order to decrease its effect on self-efficacy. Developing abilities and traits that are used for coping allows learners to perceive more control over the environment and reduce emotional arousal (Bandura, 1977).

Family, peers, faculty, and spiritual communities can provide important environmental supports that may impact self-efficacy to varying degrees, and what is gained from these supports can bolster or undermine college self-efficacy. Much research has tested the role of family, peers, and university staff and faculty as important sources of environmental support during college. Torres and Solberg (2001) found that family support contributed to college self-efficacy, although helicopter parenting is negatively associated with general self-efficacy in college students, likely due to the students' lack of mastery experiences for overcoming challenges (van Injen et al., 2012). Regardless of the quality of family relations, the ability to trust peers is positively associated with social self-efficacy during college (van Injen et al., 2012). Also, previous studies suggest a connection between mentorship and self-efficacy: College students who indicated they interact with faculty and/or are mentored by a faculty member indicated higher academic self-efficacy, which may be due to gaining encouragement, direct instruction, or study skills information from faculty members (DeFreitas & Bravo, 2012). Thus, research exists that links environmental support from family, peers, and faculty to self-efficacy in college.

In contrast, the role of environmental support from spiritual communities has been understudied, even though several research has suggested its positive implications. Duffy and Lent (2008) suggest that members of a spiritual community may model how to face challenges

that can be encountered in college. Spiritual models are individuals who support learners through spiritual modeling by being available and impacting the learner (Oman et al., 2009). When a person is described as having high environmental support from spiritual models, that means they have an accessible spiritual model (or several models) in the environment, and the model is influential enough to draw the participants attention to the model's important qualities, to get the participant to remember (retain) the model's examples later, and to be inspired or motivated by that model (Oman et al., 2009). As a result of environmental support from spiritual models, learners may develop *ultimate concerns*, which refers to intentional practices or dispositions such as forgiveness (Emmons, 2000). Ultimate concerns can be taught/learned explicitly through direct instruction and demonstration or implicitly through observational learning (Oman & Thoresen, 2003). Not only may *community models* use their own lives and stories to teach lessons, but they may use sacred texts to reinforce explicit instruction. Interestingly, not only can individuals in the college student's community serve as spiritual models, but historical figures such as Dr. Martin Luther King, Jr., Jesus Christ, the Buddha, Mohammed, Moses, and Confucius, also known as *prominent models*, may teach similar ultimate concerns (Oman et al., 2012).

Integrating literature of spiritual modeling and Lent et al.'s (2007) model, it is plausible that spiritual models can help college youth develop positive personality traits that will eventually boost their college self-efficacy. The next sections provide the rationale for four traits, spirituality, mindfulness, forgiveness, and hope, as potential mediators of the relationship between environmental support from spiritual models and college self-efficacy. The focus on these traits expanded the model's initial focus on the Big Five personality traits (Lent et al., 2007).

Traits and College Self-Efficacy

This study focused on four traits: spirituality, mindfulness, forgiveness, and hope. These traits were chosen because spirituality, mindfulness, forgiveness, and hope are malleable traits known to be associated with environmental support from spiritual models. (Davidson, Feldman, & Margalit, 2012; Kiken, Garland, Bluth, Palsson, & Gaylord, 2015; Luskin, Ginzburg, & Thoresen, 2005; Oman et al., 2007, Oman et al., 2008, Oman et al., 2009). Thus, consistent with Lent et al.'s (2007) argument that environmental support (e.g., modeling) may influence one's personality traits, it is possible that when college students have more support from spiritual models, they will report stronger tendencies in being spiritual, mindful, forgiving, and hopeful. The following sections summarize how the four traits were related to both environmental support from spiritual models and college self-efficacy, and presented the traits as potential mediators of the path from environmental support from spiritual models to college self-efficacy.

Spirituality. Spirituality is the combination of spiritual transcendence and religious practices, as defined by Piedmont (2001). Spiritual transcendence is the ability to view life from an objective perspective that is greater than what is occurring in the current place and time, including three elements: prayer fulfillment, connectedness, and universality (Piedmont, 2001). Prayer fulfillment involves encountering a transcendent reality outside oneself resulting in a sense of contentment, strength, peace and/or joy. Connectedness is believing that there is a human reality that connects all beings, and that the self is a part of that reality. Finally, universality is belief in a bond that unites life (Piedmont, 2009). Piedmont (2009) also indicates the importance of measuring religious sentiments, or religious practices of the individual, including reading sacred texts, other religious but not sacred texts, attending services, and prayer

frequency. Piedmont (2009) notes that individuals can be religious without being spiritual, or vice versa, and that they can be high or low in both religiosity and spirituality.

Although Piedmont (2001) does not provide information on how individuals become spiritual, the social learning theory posits that spirituality is developed in an individual's cultural context, and that spiritual models guide the learning (Bandura, 2003; Oman, 2013). During college, students' social systems may change from a family unit that may or may not emphasize spiritual values to a peer-dominated social system that presents different views of religion and spirituality and promotes an individual and eclectic spiritual style (Arnett & Jensen, 2002). When asked to describe individuals who are spiritual and religious, students' responses were mostly positive, while other students described religious people as closed-minded and judgmental (Cook, Borman, Moore, & Kunkel, 2000). Emerging adults who view spiritual people negatively may not learn from spiritual models, but students who maintain connections with spiritual models may increase in spirituality (Oman et al., 2009).

Empirical evidence supports the association between availability and impact of spiritual models and spiritual aspects of attending services, reading sacred texts, prayer frequency, spiritual intensity, religious intensity, and importance of faith (Oman et al., 2009). While Oman and colleagues (2009) did not utilize Piedmont's measures of spiritual transcendence and religious sentiments, they found that having spiritual models is associated with intrinsic religiosity but not extrinsic religiosity. These findings suggest that people who are engaging with spiritual models are not doing so for material gain or as a means to an end, such as networking; rather, college students who have spiritual models develop faith that is important to them personally (Oman et al., 2009), which is more closely related to spirituality (Piedmont, 2001). Students who have spiritual models may learn the transcendent spiritual sentiments such as

connectedness to others and to a higher power, may believe their prayers are fulfilled, and may experience universality in addition to engaging in the practices of the models.

Quantitative studies have found a relationship between spirituality and achievement (Jeynes, 2015), but few studies have tested spirituality and self-efficacy. Previous research has established a relationship between having support from one's religious community and career decision self-efficacy (Duffy & Lent, 2008), and another study on nursing students in South Korea revealed that spirituality mediated the entire relationship between professional values and self-efficacy (Jun & Lee, 2016). However, a gap remains in students' experience of spirituality in relation to college self-efficacy. According to Piedmont (2001), spirituality leads to personal agency beliefs, one type of which is self-efficacy (Travers, Morisano, & Locke, 2015) A college student who learns spirituality from a spiritual model may pray about coursework or an upcoming exam, and experience fulfillment in the form of confidence. The confidence may then increase her self-efficacy in performing well at the academic tasks. Additionally, achieving spirituality may cause a college student to seek the harmony that comes through connectedness with others, benefitting interpersonal self-efficacy.

Mindfulness. Mindfulness is non-judgmental awareness and acceptance of the present moment, and is characterized by non-reactivity (Bishop et al., 2004; Kabat-Zinn, 1994). Mindfulness can refer to a practice involving meditation, a transient state of present moment awareness, and/or a mindful lifestyle (Carlson, 2013), and practicing mindfulness can develop mindful states that over time increase into a mindful disposition (Kiken, Garland, Bluth, Palsson, & Gaylord, 2015). Mindfulness may allow students to consider internal and external sensations and mental processes while revising their value system, which is a common activity of emerging adulthood (Arnett, 2000; Rogers, 2013).

Mindfulness interventions are often conducted in group sessions (Baer, 2003), meaning mindfulness can be learned through social interactions. Supporting this claim, college students increase mindfulness while reporting less stress when they learn mindfulness from a facilitator (Shapiro, Oman, Thoresen, Plante, & Flinders, 2008). While it is common to encounter critical views of mindfulness as having Buddhist origins, other belief systems embrace forms of mindfulness (Symington & Symington, 2012), indicating non-judgmental awareness of the present moment may be learned from spiritual models across belief systems. The importance of studying sacred texts is emphasized by spiritual models as a method for behaviors and dispositions to be learned from prominent models (Bandura, 1977). When spiritual models encourage learners to meditate or contemplate on sacred texts or to meditate using calming words, learners may develop a mindful disposition as a result of consistent practice (Shapiro, Oman, Thoresen, Plante, & Flinders, 2008). Spiritual traditions also involve acceptance of and non-reactivity toward suffering (Symington & Symington, 2012), which is modeled by prominent spiritual figures across traditions and is likely to be modeled by spiritual supports in a student's community, fostering present moment awareness of suffering and divine action in one's life (Chen, Brown, & Kotbungkair, 2015). Heretofore, no research directly indicates that individuals will learn mindfulness from spiritual models, but considering that present moment awareness, non-judgement, and non-reactivity are part of spiritual traditions, associations seem reasonable.

Additionally, mindfulness is associated with academic self-efficacy (Hanley, Palejwala, Hanley, Canto, & Garland, 2015; Keye & Pidgeon, 2013). Mindfulness likely promotes adaptive thinking, one type of which concerns thinking that one can be successful even following failures (Keye & Pidgeon, 2013). While there is a lack of research associating mindfulness with social

success, non-reactivity and non-judgement associated with mindfulness impedes habit formation caused by implicit learning (Whitmarsh, Uddén, Barendregt, & Petersson, 2013), which may be good for relationships by decreasing the likelihood of habitual anger responses that perpetuate conflict. If a college student's spiritual models use skills of present moment awareness of suffering and looking toward divine action with non-judgement and non-reactivity, the student may learn mindfulness and, once the student practices it in face of failure or challenging interpersonal relationships, they may experience enhanced college self-efficacy.

Forgiveness. Many definitions have been derived for *forgiveness*, and the most comprehensive view of forgiveness defines it as reframing transgressions so that one's responses to the situation or person change from negative valence to positive valence or at least a neutral valence (Thompson et al., 2005). In addition to valence of response changing, the strength of response may or may not change, as is the case for individuals who weaken responses by distancing themselves from the person or situation that enacted the transgression (Thompson, 2005). There are three types of forgiveness: forgiveness of self, forgiveness of others, and forgiveness of situations; altogether, the three are known as the forgiveness triad (Enright, 1996). While forgiveness of others is most commonly discussed in literature, forgiveness of self is defined as identifying one's own wrongdoing, taking responsibility, and exercising compassion toward oneself (Thompson et al., 2005). Situational forgiveness is needed in circumstances where an individual's positive expectations are violated, leading to negative emotions such as disappointment (Thompson et al., 2005). Forgiveness of situations and that of self are most highly and negatively associated with depression and anxiety and positively associated with life satisfaction, while forgiveness of others is most negatively associated with anger (Thompson et

al., 2005). Additionally, all three aspects of forgiveness are positively associated with satisfying and healthy relationships (Thompson et al., 2005).

While it is understood that reframing cognitions surrounding the self, others, or situations is necessary for forgiveness, factors that make individuals more or less likely to develop forgiveness are unknown. However, emphasizing forgiveness is common across spiritual systems, and one study has found that individuals who are in a spiritual group demonstrate higher forgiveness, especially when the group studies sacred texts, shares needs, and confesses sins to one another (Wuthnow, 2000). Therefore, it stands to reason that individuals will forgive to the extent that they experience and observe forgiveness conducted by spiritual models. Spiritual modeling is associated with forgiveness of others, but not with forgiveness of self (Oman et al., 2009). While Oman et al. (2009) did not interpret these findings, forgiveness of others may be learned from community models, and sacred texts and the writings of famous spiritual leaders, such as those in the Bible or delivered by Dr. Martin Luther King, Jr., emphasize the act and benefit of forgiving others. Forgiveness of oneself is a more novel concept that is less discussed in sacred texts and by prominent spiritual models and community members in traditional spiritual settings. However, work has been done on shame resilience and self-compassion, which are similar constructs to self-forgiveness, and findings from these studies have gained momentum in spiritual/religious research (Brown, 2006; Ghorbani, Watson, Chen, & Norballa, 2012; Neff, 2003). Therefore, as spiritual individuals learn about the importance of forgiving or being kind to oneself, it is likely that they will model self-forgiveness to learners, who may become more self-forgiving as part of a whole picture of forgiveness in the life of a learner. Unfortunately, Oman et al. (2009) do not report findings relating spiritual modeling to forgiveness of situations. Nevertheless, sacred texts commonly communicate an open acceptance

of suffering; thus, having access to spiritual models who are well versed with sacred texts should allow learners to be forgiving of events that are less than ideal.

While forgiveness is associated with positive psychological outcomes and buffers anger responses (Thompson et al., 2005), little is known regarding the impact of forgiveness in education. Few studies have been conducted to assess associations between forgiveness and self-efficacy, in which forgiveness is associated with increased general self-efficacy of college students (Baghel & Pradhan, 2014). Only one study has linked forgiveness with college self-efficacy, which indicates that the interpersonal aspects of college self-efficacy (i.e., roommate and social self-efficacies) are associated with forgiveness while academic self-efficacy (i.e., course self-efficacy) is not associated with forgiveness (Macaskill & Denovan, 2013). Failing to measure the intrapersonal aspect of forgiveness negates the potential impact of forgiving oneself for poor performance in college academics or forgiving the situation when the material or assessment procedures are difficult. Learners who have forgiving spiritual models are likely to become forgiving individuals. Learning to forgive involves practice, which may lead to dispositional forgiveness and may be extended to forgiving oneself and forgiveness of situations. Being able to forgive others may be helpful for fostering positive social and roommate relationships, and being able to forgive oneself for poor performance in the past or being forgiving of a situation that lead to poor performance may be associated with course self-efficacy. Taken together, learning forgiveness from a spiritual model may lead to greater college self-efficacy.

Hope. Hope can be described as a situation-based state of mind or a disposition (Cheavens et al., 2006; Feldman & Dreher, 2012), and is the belief that one's goals can be attained. Hope works through two types of thinking: *pathways* and *agency* (Snyder, 1991).

Developmentally, pathways or a sense of ability to meet a goal in many ways develop first as sensation, perception, and basic understanding of linkages between cause and event (Snyder, Cheavens, & Sympson, 1997). Second, the agency aspect of hope requires self-recognition, understanding that oneself can be the cause of events, awareness of the ability to form goals, and remembering that the individual has met goals in the past and present with likelihood to meet them in the future (Snyder, 2000). Issues that block goal achievement, such as taking difficult classes or experiencing interpersonal conflict, necessitate hope (Snyder et al., 1997).

Social cognitive explanations of hope suggest that children overcome barriers to goals by learning agentic and pathways thinking from models, and a child's earliest models are parents/caregivers (Elliot & Sherwin, 1997). If models proposed agentic and pathway thoughts to children early, future difficulties are likely to be viewed as challenges that can be overcome thought a variety of methods, which is hopeful thinking (Snyder et al., 1997). Models of hope help learners develop concrete goals, help learners break down goals into manageable parts when necessary, and offer agentic and pathways thinking throughout the process of the learner reaching goals (Snyder, 1995; 1997, Elliot & Sherwin, 1997) For low-hope individuals, Snyder (1995) reports finding role models to learn from is an important feature of increasing hope, as is taking part in a culture where goals are discussed with friends and stories of hope are heard. Taking part in groups with collectivistic orientations, such as belonging to a religion/spiritual system, may contribute a sense of collective hope by defining goals and pathways for reaching goals, but hope may decrease at the individual level for someone who transitions outside a culture of origin (Elliot & Sherwin, 1997). Emerging adulthood is a developmental transition that often includes a cultural transition, especially for emerging adults who transition from homes where religion is important into higher educational settings where diverse perspectives and an

emphasis on individuality are encountered (Arnett, 2000). However, emerging adults who maintain or develop new spiritual models may experience higher hope as models help learners clarify goals, consider a variety of pathways, and maintain positive agentic thoughts (Oman et al., 2009).

One of the well-researched areas of hope and positive outcomes is in academics, with findings that hope is associated with grade point average and graduation rate (Buckelew et al., 2008; Curry, Snyder, Cook, Ruby, & Rehm, 1997; Snyder et al., 2002), and is a better predictor of academic success than predictive test scores (Rand et al., 2011). Taken together, hope may be a personal resource that contributes to self-efficacy (Feldman, Davidson, Ben-Naim, Maza, & Margalit, 2016). While hope and self-efficacy both deal with expectancy, self-efficacy focuses on the abilities of the individual with no regard for pathways to achieving a goal. Also, self-efficacy is predominantly derived from previous experience and less from modeling of agentic thinking, although negative previous experiences can decrease hope (Feldman et al., 2016). The final consideration that hope and self-efficacy are different is that useful studies of self-efficacy are domain specific, while hope tends to be studied as a trait (Gallagher, Marques, & Lopez, 2017). Several studies report associations between hope and academic self-efficacy (Carifio & Rhodes, 2002), and directionality has been established through longitudinal studies of academic self-efficacy, one where hope is a mediator leading to academic self-efficacy in college students (Feldman et al., 2016), and another where a hope intervention increased academic self-efficacy over time (Feldman, Davidson, & Margalit, 2015). Finally, the most compelling research for this path is that hope has been associated with college self-efficacy (Macaskill & Denovan, 2013). College students who have supportive spiritual models may share their struggles with those support persons, who likely provide encouragement that the learner is able to succeed and help

the learner brainstorm ways to meet the goal, producing hope in the learner. Subsequently, the hopeful learner will use her or his confidence and strategic thinking to manage academic and interpersonal problems during college. Therefore, hope may serve as a mediator from environmental support from a spiritual model to college self-efficacy.

Perspective-Taking as a Moderator

The current study introduced perspective-taking as a moderator, meaning perspective-taking may strengthen the relationship between environmental support from a spiritual model and the four trait mediators. Perspective-taking, the cognitive aspect of empathy, involves considering the point of view of another person. Perspective-taking abilities, as described by Piaget, form as an individual is informed of the cognitive positions of others, and adept perspective-takers will develop the ability to infer potential thoughts and feelings of others without direct instruction (DeVries, 1997). Associations are known to exist between perspective-taking and three of the trait mediators, spirituality (Markstrom, Huey, Stiles, & Krause, 2010), forgiveness (Takaku, 2001), and mindfulness (Block-Lerner, Adair, Plumb, Rhatigan, & Orsillo, 2007). High perspective-taking involves concern for others over oneself (Davis, 1983), which may promote forgiveness and a sense of connection to others that is important for spirituality (Piedmont, 1999). Perspective-taking is not associated with emotional reactivity, and is negatively associated with personal insecurity (Davis, 1983), which may allow for non-judgmental, present moment awareness and acceptance of emotions involved in mindfulness. To date, no known studies have tested the role of perspective-taking in hope development. Snyder (1995) has proposed that models who offer perspectives that cause a learner to think divergently about problems and personal agency may help the learner develop hope.

Community and prominent spiritual models may demonstrate religious practices such as attendance in religious service, reading sacred texts, and prayer, but meaningful religious practices are rooted in spiritual precepts of connectedness, prayer fulfilment, and universality (Oman et al., 2009; Piedmont, 1999). Ideally, spiritual models would promote spiritual transcendence with some concrete practice. Perspective-taking is associated with spiritual-modeling, although the association is not explained (Oman et al., 2009). Tentatively, a college student who has a spiritual model, but has low perspective-taking may not be capable of inferring the thoughts and emotions that lead the model to display non-reactivity and nonjudgement, to grant forgiveness across situations, to be consistent in spiritual belief and practice, and/ or to maintain hope during challenges. Instead, these low perspective-takers may focus on the overt religious practices of the spiritual models and may not seek to understand the sentiment behind the rituals, leading to engagement in religious practice but not formation of dispositions that could lead to higher college self-efficacy. Conversely, high perspective-takers would observe spiritual models, ask questions and converse with models about her or his thoughts and actions, deepen understanding of sacred texts, and practice states of mindfulness, forgiveness, spirituality, and hope, which eventually lead to internalizing these states as traits. Therefore, perspective-taking may serve as a moderator of the relationships between environmental support from a spiritual model and the trait mediators.

The Current Study

The current study sought to address the gap in literature regarding the impact of environmental support form spiritual models on college self-efficacy and tested the role of spirituality, forgiveness, mindfulness, hope, and perspective-taking. The study focused on three groups of variables proposed by Lent and colleagues (Lent, 2004; Lent et al., 2007): *environmental support* from spiritual models, *positive traits*, and college *self-efficacy*. A

moderated mediation path model (see Figure 2) was fit to assess the hypotheses that (1) environmental support from spiritual models would be associated with college self-efficacy; (2) the relationship between environmental support from spiritual models and college self-efficacy would be mediated by spirituality, forgiveness, mindfulness, and hope; (3) perspective-taking would moderate the path from environmental support from spiritual models to the mediators, such that the relationship from environmental support from spiritual models to the mediating traits would be stronger among people with good perspective-taking.

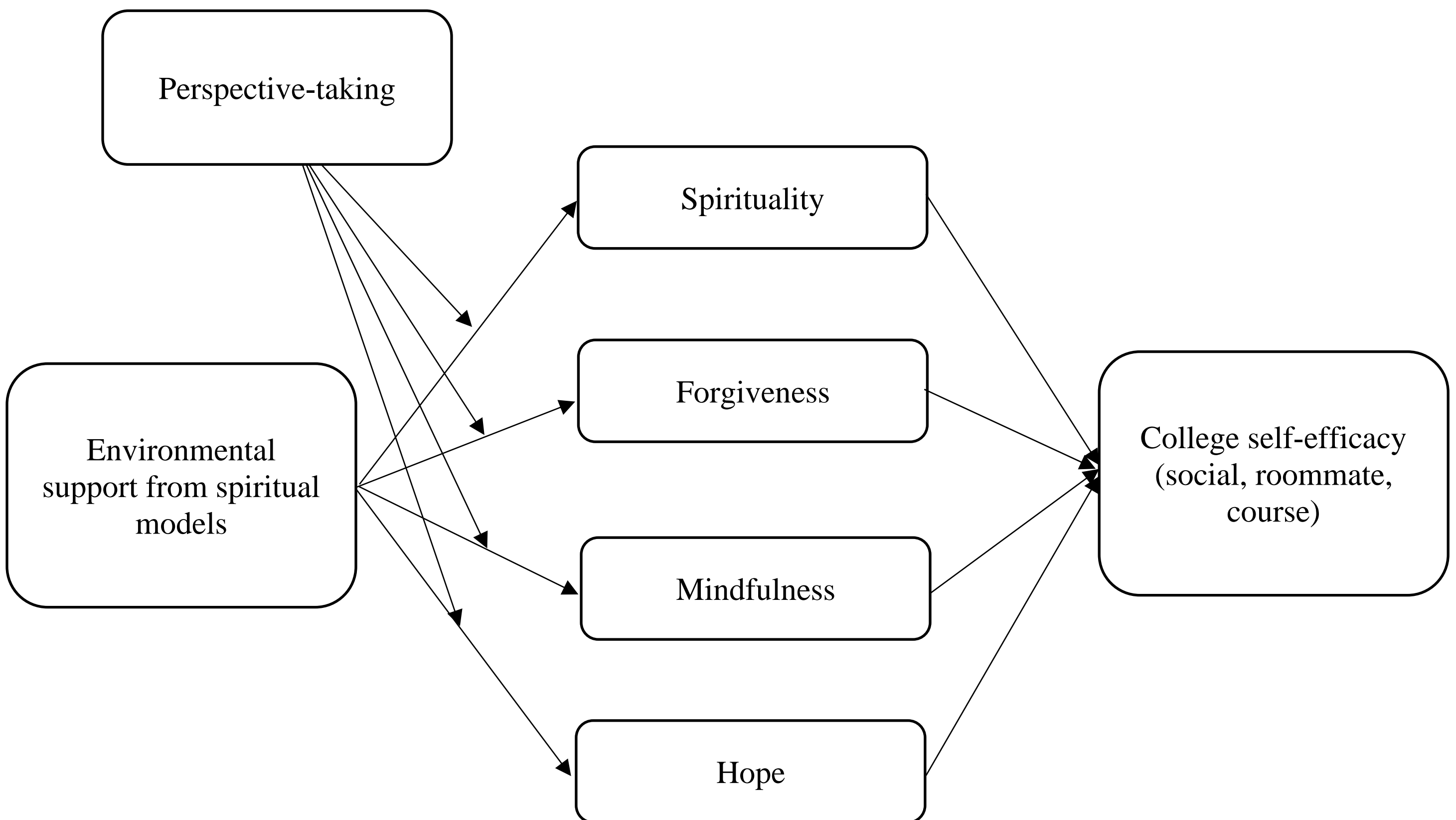

Figure 2. The hypothesized path from spiritual modeling to college self-efficacy.

Chapter 2: Method

Participants

The current study sought to recruit a spiritually diverse sample in hopes that the conclusions would be generalizable to emerging adult college students. Oman et al. (2008) and Piedmont et al. (2008) note that recruiting predominantly Christian participants presents a lack of generalizability limitation to findings involving constructs such as support from spiritual models and spirituality. To guard against this limitation, Oman et al. (2008) recruited participants from public universities as well as from a Roman Catholic university in one study. The current study followed their example and sought to combine a sample of participants from a private Christian university and a public university, where fewer students would endorse Christianity in favor of other religions or beliefs.

Additionally, the projected sample size was based on sample sizes of validation studies of scales used, which varied widely. Oman et al. (2008) validated the SMILE with 1010 participants, excluding participants over age 30. Piedmont and colleagues (2008) validated the ASPIRES short from with a total sample size of 686 participants, wherein 309 participants were college students. The Cognitive and Affective Mindfulness Scale – Revised (CAMS-R) was initially validated with 548 university student participants (Feldman, Hayes, Kumar, Greeson, & Laurenceau, 2006). Psychometric properties of the Heartland Forgiveness Scale were established in six studies, one with a sample size of 499. (Thompson et al., 2005). Recent validation of the Hope Scale was conducted with 162 participants in one study and 118 participants in another study within the same validation project (Cheavens, Heiy, Feldman, Benitez, & Rand). The college self-efficacy inventory (CSEI) was assessed for psychometric properties with 257 students (Gore, Lewerke, & Turley, 2005). The average of these sample sizes ranged from 400

participants to 500 participants. Considering the typical enrollment of specific psychology courses at the public and private universities, the researcher determined a target sample of 400 participants.

A total of 401 undergraduate college students participated in the study from two universities. One hundred eighty-eight students participated from a Mid-Southern public, urban research university, and 214 undergraduate students participated from a Mid-Southern private, religiously affiliated university. Seven participants were excluded from the sample due to their age exceeding 29 years, because emerging adulthood is defined as the ages 18-29 (Arnett, 2000). Ten additional participants were excluded for having too much missing data, each of whom had two or more items missing from at least one scale. The resulting sample included 384 participants.

Participant demographics included sex, race/ethnicity, cohort, and religious affiliation. More participants were male (54.9%) than female (44.8%). The majority of the sample was Caucasian (71.4%), followed by African American (19.3%), Hispanic/Latino(a) (3.4%), other (2.4%), Asian/Pacific Islander (1.6%), Middle Eastern (0.5%), and American Indian/Native American (0.3%). Freshmen comprised the largest cohort within the sample (33.3%), followed by sophomores (28.9%), juniors (21.1%), and seniors (16.7%). The majority of participants endorsed Christianity as her or his religious affiliation (90.1%). Other religions affiliations represented included atheist/agnostic (6.8%), other faith tradition, (2.3%), Muslim (0.5%), and Buddhist (0.3%).

Procedure

The study was approved by the Institutional Review Board (IRB) at the public and private universities. At the public, urban research university, a convenience sample of students

was recruited from undergraduate educational psychology courses, and students received course credit for participation. Teaching assistants for a general education course posted a research invitation on the learning management system. Students followed the link on the invitation and were prompted to sign the informed consent. Students then proceeded to participate in the online survey. Survey response times for the online version ranged from 10-40 minutes.

At the private university, a convenience sample of undergraduate students was recruited from undergraduate psychology courses. All professors in the Department of Psychology agreed to allow class time for participation and gave extra credit as compensation for participation. In courses taught by three of the four participating professors, the researcher attended the courses, invited students to participate, and administered the surveys. One professor chose to administer the surveys to her own classes, which was approved by the IRB at the private, religious university. Per IRB protocol, the professor read the same invitation and instructions as the researcher used to solicit participants, administered the surveys, and stored the surveys in a locked filing cabinet until the researcher was able to obtain the surveys. Similarly to the online survey administration, participants who completed the survey on paper experienced response times ranging from 20-40 minutes. After administering assessments to each class or obtaining assessments from another professor, the researcher manually entered the data into an excel spreadsheet, where it was combined with the data from the online surveys.

Measures

Six assessment tools were used to measure the explanatory variable, mediating variables, response variable, and the moderating variable. Each of the scales had previously been utilized with undergraduate samples, and each assessment tool had demonstrated good reliability for college samples.

Environmental support from spiritual models. Environmental support from spiritual models was measured using two subscales of the Useful Exemplar scale of the Spiritual Modeling Inventory of Life Environments (SMILE; Oman, Thoresen, Park, & Shaver, 2009). The Religious/Spiritual Organization and Famous and/or Divine Persons subscales were used. The subscales assessed the extent to which a person has accessible community and prominent spiritual models around. To assess modeling from community models, participants completed the Religious/Spiritual Organization subscale, which instructed participants to consider the person who demonstrates the most spiritual skills, identify who that person in in relation to the participant, circle spiritual skills that person demonstrates highly, indicate how often the participant sees the person on a 7- point Likert scale (1 = almost every day, 4 = a few times a year, 7 = he/she is no longer alive), and respond to questions regarding the stem, "How often do you witness his/her positive spiritual example in various kinds of situations?" on a 5-point Likert scale (1 = often, 4 = never, 5 = not applicable). Items that stemmed from this prompt included "When she/he tells stories or talks about her/his experiences or the experiences of others – there's just something inspiring about how her/his mind works" and "Even beyond how she/he acts in one situation, it's also his/her consistent dedication to what's important." To assess modeling from prominent models, the Famous and/or Divine Persons subscale was used. Participants were asked to consider one famous person they have heard about through a religious organization (such as Jesus or the Buddha). Participants responded to whether or not they can think of someone as an example, circled spiritual skills that person demonstrates or demonstrated highly, and indicated how often the participant hears about this person or discusses this person with someone else on a 6-point Likert scale (1 = almost every day, 6 = once every three years or less often). Participants responded to the following items that complete the stem, "For this

person's ability to inspire you, how important are the following?" on a 4-point Likert scale (1 = very, 4 = not at all). Some of the items completing the stem are, "What he/she says about problems and aspirations of people like me" and "How she/he helps resolve conflicts (or potential conflicts) between other people." All items were reverse coded. Total scores were used to determine associations with the mediators, the outcomes, and the moderator. Test-retest reliability had been demonstrated for the community and prominent models subscales ($r = .74$, $r = .78$, respectively). In the current study, good reliability was demonstrated for spiritual modeling by community models, $\alpha = .85$, spiritual modeling by prominent models, $\alpha = .90$, and for the total spiritual modeling including community models, prominent models, and one availability question with each, $\alpha = .89$.

Spirituality. Spirituality was measured using the self-report form of the Assessment of Spiritual Transcendence and Religious Practice Short form (ASPIRES; Piedmont, Kennedy, Sherman, Sherman, & Williams, 2008). Psychometric properties of the Spiritual Transcendence and Religious Index have been validated for undergraduate samples ($\alpha = .72$ and $\alpha = .79$, respectively; Piedmont, 2008). The Religious Index has four items, with three items measured on a 7-point Likert scale (1 = never, 7 = several times a week) and one item measured on a 5-point Likert scale (1 = never, 5 = quite often), and the spiritual transcendence scale has nine items measured on a 5-point Likert scale (1 = strongly agree, 5 = strongly disagree). A sample item from the religious index includes, "How often do you read the Bible/Torah/Koran/Geeta," and a sample item from the spiritual transcendence scale includes, "I find inner strength and/or peace from my prayers and/or meditations." Items one, two, three, four, seven, eight, and nine on the spiritual transcendence scale were reverse coded. Total scores for each item were used, combining the religious index and spiritual transcendence scales. Psychometric properties of the

spiritual transcendence and religious index demonstrated good reliability in the current study for the scales of spiritual transcendence α = .71, religious index, α = .84, and total scores, α = .79.

Mindfulness. Mindfulness was measured using the Cognitive and Affective Mindfulness Scale – Revised (CAMS-R; Feldman, Hayes, Kumar, Greeson, & Laurenceau, 2006). This 12-item measure reflects attention, present focus, awareness, and acceptance, and is measured on a 4-point Likert scale (1 = rarely/not at all, 4 = almost always). Items two, six and seven were reverse coded. The scale has good reliability in college samples ranging from α = .74 to α = .77, and total scores were used to test associations with other constructs. A sample item included, "I am able to accept the thoughts and feelings I have." Good reliability for the scale was demonstrated in the current study, α = .77.

Forgiveness. Forgiveness was measured using the 18-item Heartland Forgiveness Scale (HFS; Thompson et al., 2005) which had been validated for college students and yields a composite score (α = .83) and scores for the Self-Forgiveness (items 1-6; α = .72), Other-Forgiveness (items 7-12; α = .73), and Forgiveness of the Situation (items 13-18; α = .77) subscales. Scores of the 18 items were summed to reflect one's level of forgiveness. The scale was measured on a 7-point Likert scale (1 = Almost Always False of Me, 7 = Almost Always True of Me), and higher scores indicated higher forgiveness. Items two, four, six, seven, nine, eleven, thirteen, fifteen, and seventeen were reverse coded. Sample items included, "Although I feel badly at first when I mess up, over time I can give myself some slack," "When someone disappoints me, I can eventually move past it," and "If I am disappointed by uncontrollable circumstances in my life, I continue to think negatively about them." Good reliability for the total Heartland Forgiveness scale was demonstrated in the current study, α = .77.

Hope. Hope was measured with The Hope Scale (Babyak, Snyder, & Yoshinobu, 1993), consisting of 12 items on an 8-point Likert scale (1 = definitely false, 8 = definitely true). The scale included four filler items, four items measuring Agency (α = .81), and four items measuring Pathways (α = .74), which yielded an overall total hope score (α = .86) and had been demonstrated reliable for college samples (Snyder, Shorey, Cheavens, Pulvers, Adams, & Wiklund, 2002). Sample items included, "There are lots of ways around any problem," and "Even when others get discouraged, I know I can find a way to solve the problem." Items three, five, seven, and eleven were filler items. All items except the four filler items were summed for one hope score. Good reliability for the hope scale in the current study was demonstrated for the agency scale, α = .82, pathways scale, α = .74, and the total scale score, α = .85.

Perspective-taking. Perspective taking was measured with the 7-item Perspective-Taking subscale of the Interpersonal Reactivity Index (Davis, 1983). Adequate reliability had been demonstrated with college samples (α =.71; Davis, 1980). Items are measured on a 5-point Likert scale (1 = does not describe me well, 5 = describes me well), and the total score was used to test associations with other variables. Items two and five were reverse coded. A sample item included, "I try to look at everybody's side to a disagreement before I make a decision." Good reliability of the scale was demonstrated in the current study, α = .78

College self-efficacy. The College Self-Efficacy Inventory (Solberg et al., 1993) was used to measure college self-efficacy. The 20-item inventory consisted of a total score comprised by averaging the Class, Social, and Roommate subscale items, rated on a 10-point Likert scale (0 = not at all confident, 9 = extremely confident). More current reliability estimates for scales and total ranged from α = .83 to α = .92 (Gore, Leuwerke, & Turley, 2005), and the total score of the 20 items was used to determine associations with other variables. Sample items include, "Do

well on your exams," "Join an intermural sports team," and "Divide chores with others you live with." Good reliability for the scale was demonstrated for the current study, $\alpha = .92$.

All scale items are available in the Appendix.

Analysis

Demographics, descriptive statistics, correlations, and scale reliabilities were obtained using IBM SPSS 26. Mediations and moderated mediational analyses were conducted to test all hypotheses, that spirituality, mindfulness, forgiveness and hope mediated the path from environmental support from spiritual models to college self-efficacy, and that perspective-taking moderated the path from environmental support from spiritual models to the mediators. See Figure 2. Multiple imputation was used to rectify the missing data, resulting in five imputed data sets. For each imputed data set, bootstrapped estimates were obtained to test the direct and indirect confidence intervals (Schomaker & Heumann, 2018), which suggest the effects are significant if they do not include zero. Adequate models had a comparative fit index (CFI) and Tucker-Lewis index (TLI) higher than .95 (Hu and Bentler 1999). Also in regard to model fit, the root mean square error of approximation (RMSEA) for adequate models was smaller than .08 (Browne & Cudeck 1993). All path models were analyzed using Mplus.

Chapter 3: Results

Analyses reported below are organized in order the analyses were performed. First, missing data was managed using Little's MCAR test. Next, descriptive statistics and correlations were analyzed. Third, the direct path from environmental support from spiritual models and college self-efficacy was analyzed, followed by mediation analyses. Finally, the moderated mediation analyses are reported.

Missing Data Analysis

Little's missing completely at random (MCAR) test was run to analyze missing data patterns, which initially revealed the missing data was not missing completely at random, $\chi^2(3992) = 4453.596$, $p < .001$. Four cases were removed that had three or more missing items on the College Self-Efficacy Inventory, but the data was still not missing completely at random according to Little's MCAR test, $\chi^2(3612) = 3998.832$, $p < .001$. Six additional cases were removed that contained two or more missing items from any single scale. However, Little's MCAR test still revealed the data to not be missing completely at random, $\chi^2(3030) = 3536.553$, $p < .001$. Considering that no obvious pattern of missing data was present in the data, and considering that it is possible for data to be missing at random without being missing completely at random, the researcher proceeded with multiple imputation without removing more cases. Five imputations were conducted to manage missing data in SPSS and Mplus for the following analyses.

Descriptive Statistics and Correlation Analyses

Table 1 summarizes the descriptive statistics and correlations for each variable. Spiritual modeling ($M = 72.81$, $SD = 12.14$) was significantly and positively associated with college self-efficacy ($M = 138.47$, $SD = 31.41$) with a small effect size ($r = .24$, $p < .01$), indicating that

emerging adults with environmental support from spiritual models may have higher college self-efficacy. Considering environmental support from spiritual models and relationships with the trait mediators, environmental support from spiritual models was significantly and positively associated with spirituality (*M* = 53.17, *SD* = 9.65; $r = .56$, $p < .01$). This relationship reflected a large effect size, indicating that having environmental support from spiritual models was related to higher spirituality. The relationship between environmental support from spiritual models and hope (*M* = 48.66, *SD* = 8.13) yielded the next largest effect size between spiritual modeling and the trait mediators ($r = .24$, $p < .01$). Although small, this effect size indicates that having environmental support from spiritual models was related to higher hope. Environmental support from spiritual models was positively associated with mindfulness (*M* = 31.24, *SD* = 5.67; $r = .17$, $p < .01$) and forgiveness (*M* = 84.28, *SD* = 15.20; $r = .17$, $p < .01$). These effect sizes were small, but not insignificant, indicating that environmental support from spiritual models was associated with higher mindfulness and forgiveness.

In addition to spiritual modeling being associated with the trait variables, spirituality, mindfulness, forgiveness, and hope were associated with each other. The relationship between spirituality and hope was positive with a medium effect size ($r = .34$, $p < .01$), indicating that individuals high in spirituality were also likely to report higher hope. Relationships between spirituality and mindfulness ($r = .21$, $p < .01$) and spirituality and forgiveness ($r = .22$, p < .01) were positive with small effect sizes, indicating that emerging adults reporting higher spirituality were also likely to report higher mindfulness and forgiveness. Mindfulness was associated with forgiveness ($r = .51$, $p < .01$) and hope ($r = .52$, $p < .01$). Both relationships reflected high effect sizes, indicating that to the extent that emerging adults reported being mindful, they also reported being forgiving and hopeful. Finally, forgiveness was associated with hope ($r = .41$, $p < .01$) with

a medium effect size, indicating that to the extent emerging adults reported forgiving, they also reported being hopeful. Considering that each trait mediator is associated with each other, the full mediation path was initially conducted in Mplus with mediators correlated.

College self-efficacy was positively associated with each of the four trait mediators. The effect sizes of the relationships between college self-efficacy and spirituality ($r = .32$, $p < .01$) and college self-efficacy and forgiveness ($r = .39$, $p < .01$) were medium, indicating that emerging adults who endorsed spirituality and forgiveness were likely to similarly endorse college self-efficacy. However, effect sizes of the relationships between college self-efficacy and mindfulness ($r = .52$, $p < .01$) and college self-efficacy and hope ($r = .60$, $p < .01$) were high, indicating that emerging adults who were mindful and hopeful were also likely to endorse high college self-efficacy.

Finally, perspective-taking was positively associated with all variables except spirituality. Perspective taking was associated with environmental support from spiritual models ($r = .09$, $p < .01$) with a trivially small effect size. Effect sizes for the positive relationships between perspective-taking and mindfulness ($r = .21$, $p < .01$) and perspective-taking and college self-efficacy ($r = .18$, $p < .01$) were also small, but indicated that individuals who endorsed perspective-taking similarly endorsed mindfulness and college self-efficacy. Medium effect sizes were obtained for the relationship between perspective-taking and forgiveness ($r = .31$, $p < .01$) and for the relationship between perspective-taking and hope ($r = .30$, $p < .01$). Medium effect sizes for the relationships indicated emerging adults who endorsed perspective-taking reported forgiveness and hope similarly. See Table 1.

A series of independent samples t-tests were conducted to assess differences in average scores on each of the independent, mediator, moderator, and dependent variables between the

students enrolled at the public university and the students enrolled at the private university According to Levene's test for homogeneity of variances, equal variance could not be assumed when comparing environmental support from spiritual models across institutions (F = 20.06, p < .001). An unequal variances t-test indicated significant difference existed in environmental support from spiritual models between the public university (M = 71, SD =14.65) and the private university (M = 74.85, SD = 8.87) groups, t(277.89) = -3.01, p = .003, with a small effect size (d_s= .32; Cohen, 1988). Similarly, equal variances could not be assumed between the groups on spirituality (F = 12.25, p = .001). An unequal variances t-test indicated a significant difference in spirituality scores between the public university (M = 50.29, SD = 10.35) and the private university (M = 55.63, SD = 8.35) groups, t(333.22) = -5.48, p < .001 with a moderate effect size (d_s= .57). Thus, the sample from the private university reported significantly higher support from spiritual models and spirituality.

Equal variances were assumed between groups on mindfulness (F = 1.95, p = .16). A pooled t-test indicated no difference in the mindfulness scores between the public university (M = 31.22, SD = 5.99) and the private university (M = 31.28, SD = 5.40) groups t(378) = -.09, p = .93. Equal variances were assumed between the groups on forgiveness (F = 2.71, p = .10). A pooled t-test showed no difference in the forgiveness scores between the public university (M = 85.31, SD = 15.97) and the private university (M = 83.50, SD = 8.09) groups, t(377) = 1.16, p = .25. Equal variances were assumed for group comparisons for hope scores (F = .12, p = .73). The pooled t-test showed there was no difference in hope scores between the public university (M = 49.41, SD =8.14) and the private university (M = 48.01, SD = 8.09) groups, t(379) = 1.67, p =.10.

Equal variances were assumed for perspective-taking between the groups (F = 1.49, p = .22). A pooled t-test showed there was a significant difference in perspective-taking scores

between the public university (*M* = 23.09, *SD* = 5.19) and the private university (*M* = 19.37, *SD* = 4.09) groups, *t*(377) = 7.17, *p* = .001 with a moderate effect size (d_s=.74). Participants from the public university reported significantly higher perspective-taking than participants from the private university. Equal variances were assumed between the groups for college self-efficacy (*F* = 1, *p* = .32). A pooled t-test showed there was a significant difference in college self-efficacy scores between the public university (*M* = 133.06, *SD* = 32.24) and the private university (*M* = 142.93, *SD* = 30.38) groups, *t*(370) = -3.04, *p* = .003 with a small effect size (d_s= .32). Participants from the private university reported significantly higher college self-efficacy than participants from the public university.

Table 1. Descriptives and Correlations.

Variable	*M(S.D.)*	1	2	3	4	5	6
1. Spiritual Modeling	72.81(12.14)						
2. Spirituality	53.17(9.65)	.559**					
3. Mindfulness	31.24(5.67)	.168**	.21**				
4. Forgiveness	84.28(15.20)	.167**	.22**	.51**			
5. Hope	48.66(8.13)	.240**	.341**	.516**	.405**		
6. College Self-Efficacy	138.47(31.41)	.243**	.32**	.524**	.385**	.598**	
7. Perspective-taking	21.05(5.33)	.09**	.021	.211**	.308**	.301**	.182**

Note. ** = $p < .01$.

Mediation Analyses

In a mediation path that included all four mediators, none of the indirect paths were significant in spite of the theoretical basis for these paths. Thus, all of the mediation paths were analyzed separately instead of moving forward with the larger, complex model. See Table 2 for estimates, standard errors, and confidence intervals for each of the five imputations for each of the four mediators.

Spirituality as a mediator. The direct path from environmental support from spiritual models to college self-efficacy was significant (β = .08, *p* = .17) (See figure 3). The path from

environmental support from spiritual models to spirituality was significant (β = .56, $p < .001$) with a moderate effect size ($R^2 = .314$, $p < .001$) and the path from spirituality to college self-efficacy was significant (β = .28, $p < .001$), with a small effect size for the model ($R^2 = .109$, $p = .001$). Thus, increases in environmental support from spiritual models was related to increased spirituality. Increased spirituality was related to increased college-self-efficacy. The bootstrap confidence intervals for the indirect effect from environmental support from spiritual models to college self-efficacy through spirituality (β = .16; 95% CIs [.10-.22], [.10-.23], [.09-.22], [.09-.22], and [.10-.22]) indicated that this effect was significant for all 5 imputations, meaning spirituality fully mediated the relationship between environmental support from spiritual models and college self-efficacy. The model fit was just-identified, χ^2 (0) = 0, $p < 0.001$; RMSEA < .001, 90% CI [0.20–0.26]; CFI = 1.00; TLI = 1.00.

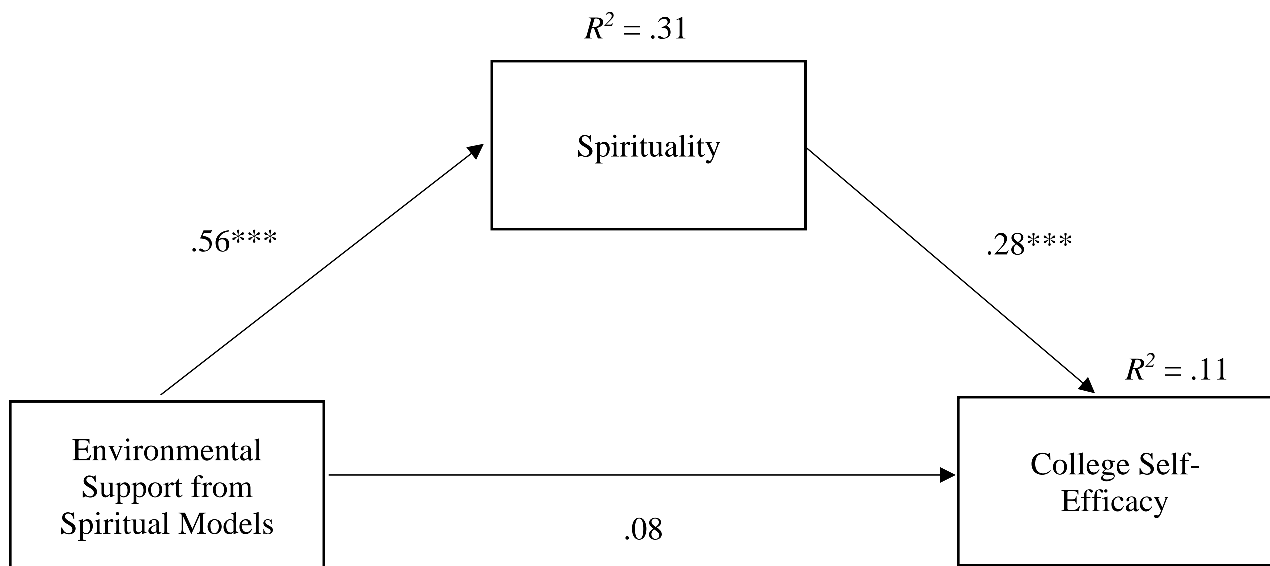

Figure 3. Mediation Path: Spirituality. Note. *** = $p \leq .001$

Mindfulness as a mediator. The direct path from environmental support from spiritual models to college self-efficacy was significant (β = .16, $p = .001$), and the bootstrap confidence intervals for the direct effect were significant (β = .16; CIs [.05-.24], [.05-.24], [.06-.24], [.05-

.24], and [.05-.24]). The indirect path was also significant, with environmental support from spiritual models to mindfulness being significant (β = .16, $p < .001$) with a small effect size (R^2 = .026, $p = .171$). In turn, the path from mindfulness to college self-efficacy displayed significance (β = .50, $p < .001$), with a moderate effect size for the model ($R^2 = .299$, $p < .001$). Thus, increases in environmental support from spiritual models were related to increases in mindfulness, and increases in mindfulness were related to increases in college-self-efficacy. The bootstrap confidence intervals for the indirect effect (β = .08; CIs [.02-.14], [.02-.14], [.02-.14], [.02-.14], [.02-.14]) were significant, indicating that mindfulness partially mediated the association between environmental support from spiritual models and college self-efficacy. See Table 2 and Figure 4. The model fit was just-identified, χ^2 (0) = 0, $p = 1.00$; RMSEA < .001, 90% CI [0.23–0.29]; CFI = 1.00; TLI = 1.00.

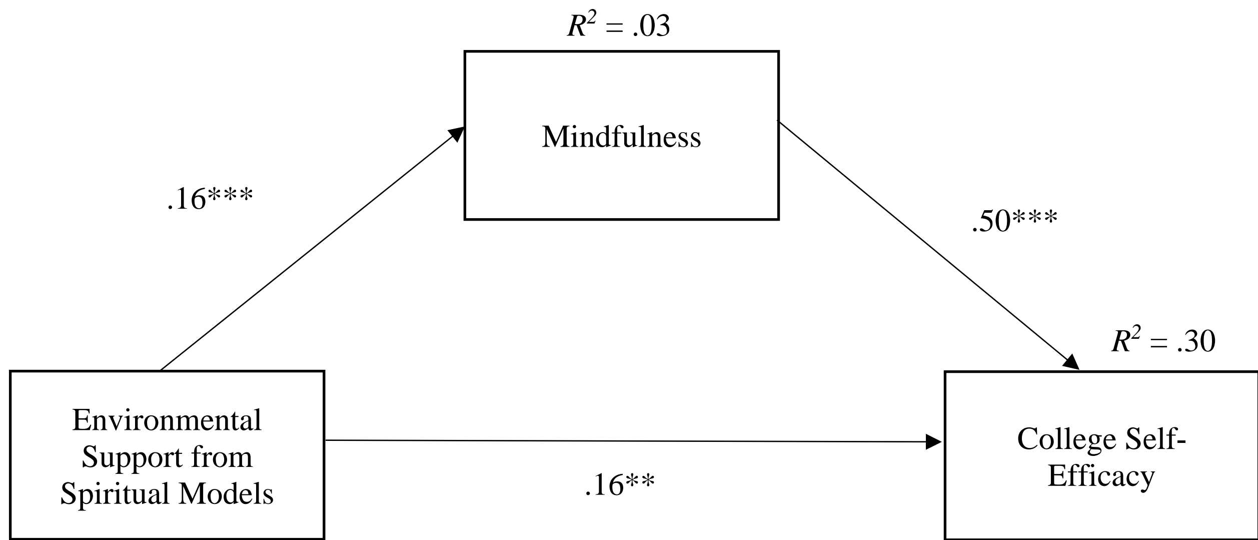

Figure 4. Mediation Path: Mindfulness. Note. ** = $p \leq .01$, *** = $p \leq .001$.

Forgiveness as a mediator. The direct path from environmental support from spiritual models to college self-efficacy was significant (β = .18, $p = .001$), and the bootstrap confidence intervals for the direct effect were significant (β = .18; 95% CIs [.07-.27], [.07-.27], [.07-.27],

[.07-.27], and [.07-.27]). The indirect path from environmental support from spiritual models to college self-efficacy was also significant with the path from environmental support from spiritual models to forgiveness being significant (β = .16, $p < .001$) with a small effect size ($R^2 = .097$). In turn, the path from forgiveness to college self-efficacy displayed significance (β = .36, $p < .001$), with a small effect size for the model ($R^2 = .179$, $p < .001$). Thus, increases in environmental support from spiritual models were related to increases in forgiveness, and increases in forgiveness were related to increases in college-self-efficacy. The bootstrap confidence intervals for the indirect (β = .06; 95% CIs [.03-.10], [.03-.10], [.03-.10], [.02-.10], and [.03-.10]) effect were significant, meaning forgiveness partially mediated the association between environmental support from spiritual models and college self-efficacy. See Table 2 and Figure 5. The model fit was just-identified, χ^2 (0) = 0, $p = 1.00$; RMSEA < .001, 90% CI [0.14–0.21]; CFI = 1.00; TLI = 1.00.

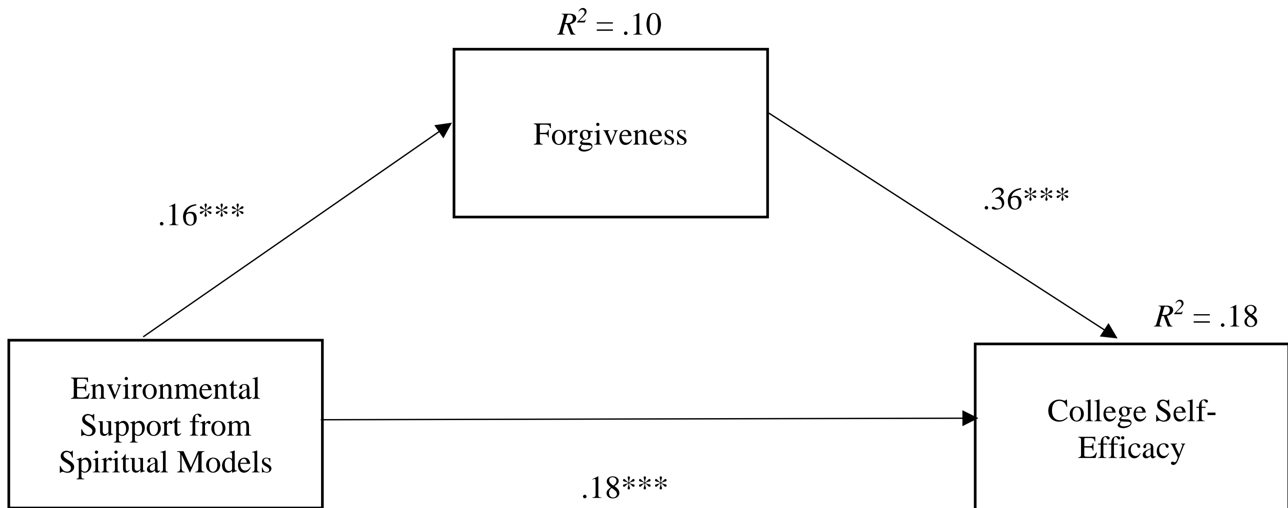

Figure 5. Mediation Path: Forgiveness. Note. *** = $p \leq .001$.

Hope as a mediator. The direct path from environmental support from spiritual models to college self-efficacy was significant (β = .10, $p < .03$), and four out of five bootstrap confidence intervals for the direct effect (β = .10; 95% CIs [.00-.18], [.00-.18], [.00-.18], [.00-

.18], [-.004-.17]) were significant. The indirect path from environmental support from spiritual models to college self-efficacy through the mediator hope was significant, with environmental support from spiritual models to hope being significant (β = .24, $p < .001$) with a small effect size ($R^2 = .055$, $p = .009$). In turn, the path from hope to college self-efficacy displayed significance (β = .57, $p = .001$) with a moderate effect size for the model ($R^2 = .369$, $p < .001$). Thus, increases in environmental support from spiritual models were related to increases in hope, and increases in hope were related to higher college-self-efficacy. The bootstrap confidence intervals for the indirect effect (β = .13; 95% CIs [.08-.19], [.08-.19], [.08-.19], [.08-.19], [.08-.19]) were significant, indicating that hope partially mediated the association between environmental support from spiritual models and college self-efficacy. See Table 2 and Figure 6. The model fit was just-identified, χ^2 (0) = 0, $p = 1.00$; RMSEA < .001, 90% CI [0.24–0.30]; CFI = 1.00; TLI = 1.00.

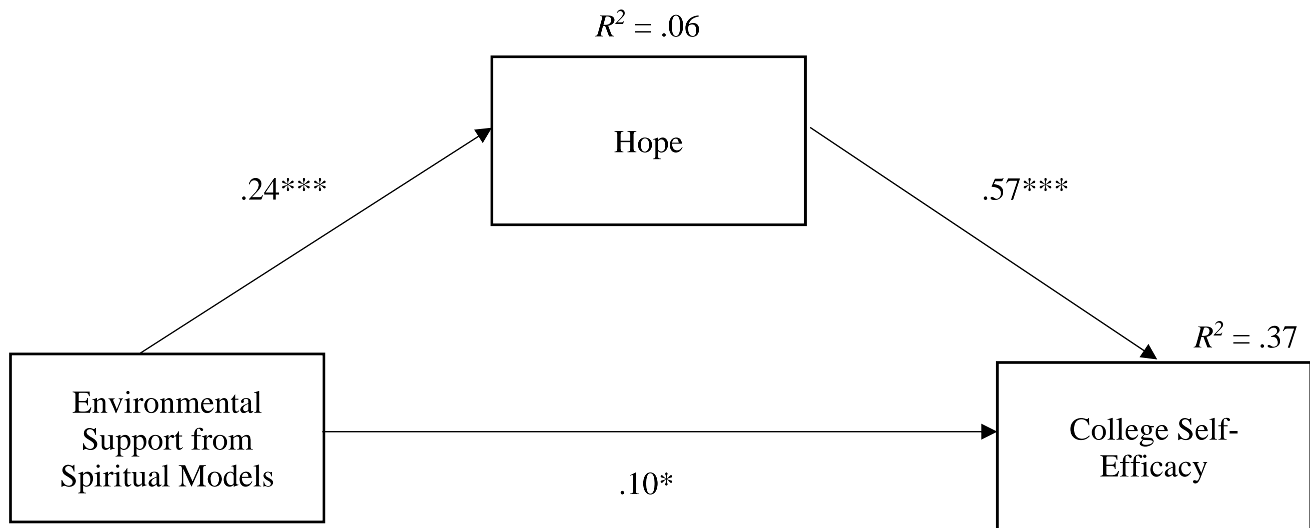

Figure 6. Mediation Path: Hope. Note. * = $p \leq .05$, *** = $p \leq .001$

Table 2. Direct, Indirect and Total Effects for Environmental Support from Spiritual Models and Mediators on College Self-Efficacy

	MI1			MI2			MI3			MI4			MI5		
Effect Name	Est.	SE	95%BCI	Est.	SE	95%BCI	Est.	SE	95%BCI	Est.	SE	95%BCI	Est.	SE	95%BCI
Spirituality															
Total Effect	.24***	.05	(.13, .33)	.24***	.05	(.13, .33)	.24***	.05	(.13, .33)	.24***	.05	(.13, .33)	.24***	0.05	(.13, .33)
Direct Effect	.08	.06	(-.05, .19)	.08	.06	(-.05, .19)	.08	.06	(-.04, .19)	.08	.06	(-.05, .19)	.08	0.06	(-.05, .19)
Indirect Effect	.16***	.03	(.10, .22)	.16***	.03	(.10, .23)	.16***	.03	(.09, .22)	.16***	.03	(.09, .22)	.16***	0.03	(.10, .22)
Mindfulness															
Total Effect	.24***	.05	(.13, .33)	.24***	.05	(.13, .33)	.24***	.05	(.13, .33)	.24***	.05	(.13, .33)	.24***	.05	(.13,.33)
Direct Effect	.16***	.05	(.05, .24)	.16***	.05	(.05, .24)	.16***	.05	(.06, .24)	.16***	.05	(.05, .24)	.16***	.05	(.05, .24)
Indirect Effect	.08**	.03	(.02, .14)	.08**	.03	(.02, .14)	.08**	.03	(.02, .14)	.08**	.03	(.02, .14)	.08**	.03	(.02, .14)
Forgiveness															
Total Effect	.24***	.05	(.13, .33)	.24***	.05	(.13, .33)	.24***	.05	(.13, .33)	.24***	.05	(.13, .33)	.24***	.05	(.13, .33)
Direct Effect	.18***	.05	(.07, .27)	.18***	.05	(.07, .27)	.18***	.05	(.07, .27)	.18***	.05	(.07, .27)	.18***	.05	(.07, .27)
Indirect Effect	.06**	.02	(.03, .10)	.06**	.02	(.03, .10)	.06**	.02	(.03, .10)	.06**	.02	(.02, .10)	.06**	.02	(.03, .10)
Hope															
Total Effect	.24***	.05	(.13, .33)	.24***	.05	(.13, .33)	.24***	.05	(.13, .33)	.24***	.05	(.13, .33)	.24***	.05	(.13, .33)
Direct Effect	.10*	.05	(.00, .18)	.10*	.05	(.00, .18)	.10*	.05	(.00, .18)	.10*	.05	(.00, .18)	.10	.05	(-.004, .17)
Indirect Effect	.13***	.03	(.08, .19)	.14***	.03	(.08, .19)	.14***	.03	(.08, .19)	.14***	.03	(.08, .19)	.14***	.03	(.08, .19)

Note. MI = Multiple Imputation. Est.= Effect Estimate. SE = Effect Standard Error. 95% BCI = for 95% bootstrapping confidence interval. * = $p < .05$, ** = $p < .01$, *** = $p \leq .001$, for normal theory test for effect estimate.

To summarize the indirect effects, environmental support from a spiritual model has greater impact on the development of spirituality than mindfulness, forgiveness, or hope. However, mindfulness, forgiveness, and hope have more impact on college self-efficacy than spirituality. Specifically, the paths involving mindfulness and hope as mediators account for the most variance in college self-efficacy. Mindfulness and hope are cognitive mediators, unlike spirituality, that allow for effective secondary appraisal of situations and do not necessarily involve the consideration of others, as may be the case with forgiveness. Further interpretations of the mediation paths are presented in the following discussion section.

Moderation Analysis

Perspective-taking did not moderate the path from environmental support from spiritual models to any of the trait variables in the paths from environmental support from spiritual models to college self-efficacy. Four separate moderated mediation paths were run, building on the mediation paths in the previous sections. The moderated mediation model with perspective-taking as the moderator and spirituality as the mediator had an inadequate model fit, $\chi 2$ (2) = 14.401, $p < 0.001$; RMSEA = .130, 90% CI [0.07–0.20]; CFI = .933; TLI = .764, possibly due to the non-significant relationship between perspective-taking and spirituality (β = .08, $p = .83$). The moderating effect of perspective-taking on the relationship between environmental support of a spiritual model and spirituality was non-significant (β = -.14, $p = .75$). The moderated mediation model with perspective-taking as the moderator and mindfulness as the mediator had an inadequate model fit χ^2 (2) = 19.447, $p < 0.001$; RMSEA = .123, 90% CI [0.07–0.18]; CFI = .90; TLI = .77, possibly due to the non-significant relationships between environmental support from a spiritual model on mindfulness (β = .06, $p = .84$) and perspective-taking on mindfulness (β = .01, $p = .99$). The moderating effect of perspective-taking on the relationship between

environmental support from a spiritual model and mindfulness was non-significant (β = .24, p = .66). The moderated mediation model with perspective-taking as the moderator and forgiveness as the mediator had an adequate model fit χ^2 (2) = 5.323, p = .07; RMSEA = .067, 90% CI [0.00–0.14]; CFI = .97; TLI = .90. The moderating effect of perspective-taking on the relationship from environmental support from a spiritual model to forgiveness was non-significant (β = .56, p = .11). The moderated mediation model with perspective-taking as the moderator and hope as the mediator had an overfit model χ^2 (2) = .49, p = .78; RMSEA = .00, 90% CI [0.00–0.07]; CFI = 1.00; TLI = 1.025, possibly due to the non-significant relationship of perspective-taking and hope (β = .62, p = .08). The moderating effect of perspective-taking on the relationship from environmental support from a spiritual model to hope was non-significant (β = -.42, p = .32). Thus, the ability to take the perspective of another person does not increase the impact of environmental support from spiritual models on spirituality, mindfulness, forgiveness, or hope.

Chapter 4: Discussion

According to Lent's (2007) model of normative life satisfaction and supporting evidence, having social support can result in positive outcomes. The current study sought to determine if maintaining environmental support from spiritual models is beneficial for college self-efficacy, a known contributor to success in college (Brady-Amoon & Fuertes, 2010; Gore et al., 2005; Gore, 2006; Zajacova et al., 2005). The first contribution of the current study was the correlation found between environmental support from spiritual models and college self-efficacy. In Lent's (2007) model, positive affect and healthy traits mediated the relationship from social support to positive outcomes. Lent's (2007) framework inspired the current study of the impact of environmental support from spiritual models to modifiable traits of spirituality, mindfulness, forgiveness, and hope. In the following sections, mediation paths were discussed separately to emphasize the impact of each variable and model impact on college self-efficacy.

Spirituality

In the current study, spirituality was a construct encompassing religious practice and spiritual transcendence (Piedmont, 2001). The indirect path from environmental support from spiritual models to college self-efficacy through the mediator spirituality was supported. Among the paths from environmental support from spiritual models to the mediators, environmental support from spiritual models accounted for the most variance in spirituality, at 31 percent of the variance in spirituality explained by environmental support from spiritual models (see Figure 3). Considering 90.1 percent of participants endorsed Christianity as their religion and chose a religious leader or someone in their faith organization as a community model, behaviors involved in religious practice may be acquired through response facilitation, a method by which individuals observe models and perform the social conventions displayed by the models

(Schunk, 2020). Behaviors involved in spirituality that can be learned by response facilitation include attending services, reading sacred texts, and participating in scripture and prayer groups. Such overt practices may be more easily demonstrated, learned, and remembered when reporting on a survey, which may also account for the moderate variance in spirituality explained by environmental support from spiritual models as opposed to the small percent variance in the cognitive mediators explained by environmental support form spiritual models.

In turn, the path from spiritual modeling to college self-efficacy through spirituality was weak, with only ten percent of the variance in college self-efficacy explained by the path. One way that spiritual models provide support is by reminding college students that their work and relationships serve existential purposes and impact the transcendent reality of the student, which may or may not be as practical as other variables for increasing college self-efficacy. Perhaps the behavioral and transcendent aspects of spirituality have little to do with the mindset of a college student who is completing schoolwork and managing social situations. Instead, primarily cognitive mediators may hold more salience in impacting college self-efficacy.

Mindfulness

Mindfulness was defined as nonreactive, non-judgmental awareness of the present moment (Bishop et al., 2004; Kabat-Zinn, 1994), and the hypothesis was supported that a path exists from environmental support from spiritual models to mindfulness to college self-efficacy through mindfulness. Environmental support from spiritual models only accounted for three percent of the variance in mindfulness (see figure 4), which indicates that spiritual models of students in the primarily Christian sample may not be discussing mindfulness with college students. Mindfulness has historical roots in Buddhism, and spiritual models in other religions are skeptical of explicitly teaching the construct (Symington and Symington, 2012). Considering

that 90 percent of the sample endorsed Christianity, it is important to examine how Christians view and apply mindfulness. Symington and Symington (2012) report a Christian model of mindfulness that includes focusing on the presence, acceptance, and internal observation that would get communicated as spiritual models demonstrate how to handle suffering and act with awareness and intentionality. Additionally, Christians emphasize the importance of studying sacred texts, which is a type of meditation (Symington and Symington, 2012). Although previous findings indicate that college students can develop mindfulness through explicit instruction (Shapiro, Oman, Thoresen, Plante, & Flinders, 2008), the current findings suggested that mindfulness may vary only slightly based on environmental support from a spiritual model. Considering that environmental support from a spiritual model accounted for more of the variance in the behavioral mediator, college students may imitate the meditative practices of the model without truly understanding and cultivating aware, non-judgmental, and non-reactive patterns of thought.

The effect size of the path from environmental support from spiritual models to college self-efficacy through mindfulness accounted for 30 percent of the variance in college self-efficacy. Previous associations between mindfulness and academic self-efficacy in the face of failure support the directionality of mindfulness to academic self-efficacy (Hanley, Palejwala, Hanley, Canto, & Garland, 2015; Keye & Pidgeon, 2013). An important finding of the current study was that college self-efficacy included social and roommate self-efficacy, which had not been previously studied in relation to mindfulness. College students who can view situations non-judgmentally, be present with their thoughts and feelings, and act with awareness may perceive themselves as more socially competent.

As spiritual models continue to learn about mindful applications within their faith traditions, perhaps spiritual models will become more comfortable with overtly emphasizing the importance of present-moment awareness, non-judgment, and intentionality. Modeling and conversing about non-judgment and non-reactivity could help college students withhold judgment of themselves during academic failures, withhold judgment of others during conflict, and respond carefully toward a variety of situations in college. In turn, as mindful practices become habitual, college students may enjoy increased confidence to manage academic and social challenges.

Forgiveness

The current study conceptualized forgiveness as an overarching construct including forgiveness of self, others, and situations (Thompson et al., 2005). The hypothesis that forgiveness mediated the path from environmental support from spiritual models to college self-efficacy was supported. It is known that individuals who participate in spiritual groups that involve reading of sacred texts and confession report higher forgiveness of others (Wuthnow, 2000). Also, a previous meta-analysis has revealed that individual forgiveness interventions, often involving steps of considering the offense, cultivating empathy and committing to offer the offender that empathy, are more effective than group interventions on forgiveness (Lundahl, Taylor, Stevenson, and Roberts, 2008). While environmental support from a spiritual model may serve as an individual's prompt to forgive, the current study found that environmental support from spiritual models may only account for about ten percent of the variance in forgiveness (see figure 5). Such small variance may be due to reluctance of spiritual models to self-disclose hurtful situations where forgiveness has been extended to or provided by another person. Self-disclosure is important between models and learners, but disclosure may be rightly withheld if it

would be harmful to another person within the community (Palmberg and Scandrette, 1977). Therefore, learning and developing forgiveness from the environmental support of a spiritual model may be limited to situations that require the model to forgive the college student, circumstances where the model identifies a learner's need to forgive someone else, or when a spiritual model encourages the college student to extend grace to themselves for disappointing situations that are out of her or his control or due to personal failure. Unfortunately, the learner may also withhold disclosure of failures and conflicts, and the model may not discern opportunities to encourage the learner to forgive. Alternatively, spiritual models may stifle the development of forgiveness by encouraging decisional forgiveness prematurely, before the learner has had a chance to fully process pain. A meta-analysis by Baskin and Enright (2004) concluded that decisional forgiveness interventions, based on making consistent proclamations of forgiveness because the individual is a forgiving person and the offender is worthy of respect, are less effective than forgiveness interventions that allow for complete processing of suffered wrong and considering the perspective of the other person before offering the offender empathy.

The path from environmental support from spiritual models to college self-efficacy through forgiveness accounted for eighteen percent of the variance in college self-efficacy. A previous study of forgiveness by (Macaskill and Denovan, 2013) of others and college self-efficacy reported that forgiveness of others was associated with the social aspects of college self-efficacy, but not the academic aspect. The current findings indicated that although the effect size is small, forgiveness was associated with total college self-efficacy, perhaps because forgiveness of oneself and situations is helpful for decreasing the impact of prior academic failures. While it is important for spiritual models to encourage college students to forgive so they can competently engage in social relations and move on from academic failures, it is also important

that forgiveness is encouraged at the right time, giving the student time and opportunity to process suffering (Baskin and Enright, 2004).

Hope

In the current study, hope is a construct encompassing agency thinking and pathways thinking, that is, the extent to which an individual thinks of oneself as capable of achieving a goal and able to consider various methods of achieving a goal (Snyder et al., 1991). Hope mediated the path from environmental support from spiritual models to college self-efficacy with the first portion of the path reflecting the association from environmental support from spiritual models to hope itself. Environmental support from spiritual models accounted for six percent of the variance in hope in the current study (see Figure 6). Emerging adulthood is an extended opportunity for college students to explore occupational identities through successes and failures in different majors (Arnett, 2000). Environmental support from spiritual models may assist learners in clarifying goals they want to pursue, considering alternative pathways when failure occurs, and maintaining a positive outlook regarding ability to reach goals (Oman et al., 2009). The extent to which models support agency and pathways thinking may depend on how much interaction the college student has with the community spiritual model, and how much of the challenges of college life are disclosed to the model. Thus, support from other models, such as parents, may be more important for hope development and maintenance in college students (Fruiht, 2015) because students may have more interaction and attention from parental models.

In turn, the path from environmental support to college self-efficacy through hope accounted for 36 percent of the variance in college self-efficacy, and the path from hope to college self-efficacy reflected the relationship and directionality established in previous research (Feldman et al., 2015; Feldman et al., 2016; Macaskill & Denovan, 2013). Individuals who are

high in hope are able to consider alternative paths to reaching goals, and may be less likely to have future plans or successes derailed by stress over academic failures. Individuals who have developed hope by learning from models are likely more aware of personal values that drive academic goal pursuit and help to maintain peace in relationships (Oman et al., 2009), which would contribute to the social aspects of college self-efficacy.

Perspective-taking as a Moderator

Perspective-taking involves considering the point of view of another person. Perspective-taking abilities originate as an individual is informed of another person's point of view, and Davis (1983) describes mature perspective-taking as being able to spontaneously shift to others' points of view. In this study, perspective-taking was correlated with small to medium effect sizes for mindfulness, forgiveness, and hope, but not with spirituality. Spirituality is partially behavioral and partially a subjective view of transcendent reality, neither of which require perspective-taking to develop. However, mindfulness involves non-judgment, non-reactivity, and acting with awareness, and the perspectives of others may be one important factor for gaining awareness and offering intentional responses in social situations. The current study was the first study known to correlate perspective-taking with mindfulness. Forgiveness involves cultivating an empathic stance toward an offender and perspective-taking is the cognitive aspect of empathy, making the positive correlation understandable. Similarly, hope is developed in relationships with others, who initially share their views of children's abilities and paths to solving problems. As children grow and encounter new challenges, returning to the perspectives of supportive caregivers can stimulate agency and pathways thinking, supporting a positive correlation between perspective-taking and hope.

However, perspective-taking was not found to moderate the paths between environmental support from spiritual models and any of the mediators. Moderators are variables that are intended to increase the impact of the explanatory variable on the response variable, or in this case, the mediators. Mediation analyses revealed that environmental support from spiritual models only slightly accounted for the variance in mindfulness, forgiveness, and hope, perhaps due to the lack of self-disclosure by the model or the learner. If the model isn't sharing personal stories with the college student, the student may not have cause to inquire about the cognitive states of the model, and the student may not have cause to take the model's perspectives. If college students believe they can learn everything they need to gain from a spiritual model by imitating the model's behaviors, they may not expend the time and energy needed to disclose and seriously consider the sentiments behind the model's actions and reported experiences. Alternatively, college students may believe they are taking away accurate representations of what spiritual models intend for them to learn, but what is gleaned from the spiritual model might not be interpreted correctly without proper perspective-taking. In these cases, college students may miss opportunities to cultivate mindful living, forgiveness, and hopeful thinking that could increase college self-efficacy.

Chapter 5: Conclusions

Environmental support from a spiritual model may play a greater role in development of partially behavioral traits such as the aspect of spirituality that involves practice than spiritual support plays in mindfulness, forgiveness, and hope maintenance during college. In turn, models with primarily cognitive mediators of mindfulness, forgiveness, and hope accounted for more of the variance in college self-efficacy than the model with spirituality as a mediator. Finally, perspective-taking was not a moderator of any of the models, indicating that if spiritual models are not looked to for developing cognitive traits of mindfulness, forgiveness, and hope, considering models' perspectives was also not important to the learner. Regarding spirituality, important behavioral components can be acquired from spiritual models through response facilitation rather than by taking the perspective of the model, and spirituality is less important for college self-efficacy. Overall, the study provides support for part of Lent's (2007) model of normative life satisfaction by supporting the path from social support, in this case spiritual, to positive outcomes, in this case college self-efficacy through healthy trait mediators.

Implications

Implications of the study are two-fold. First, identifying traits that lead to college self-efficacy can help university staff promote practices that will lead to achievement and persistence. Previous studies indicate that spirituality, mindfulness, forgiveness, and hope are malleable traits that can be developed through social interactions (Davidson, Feldman, & Margalit, 2012; Kiken, Garland, Bluth, Palsson, & Gaylord, 2015; Luskin, Ginzburg, & Thoresen, 2005; Oman et al., 2007), and the current study provided evidence that learning spirituality, mindfulness, forgiveness, and hope from a spiritual model did account for variance in college self-efficacy.

Next, the current study highlighted spiritual changes that take place in emerging adulthood (Arnett, 2000). It is known that college students report decreases in religious practices such as attending services, but emerging adults also report increases in religious beliefs and religious importance (Lefkowitz, 2005). Encountering different spiritual worldviews in college, paired with the individualistic, self-focused quality of emerging adulthood, may result in a more personal and diverse set of values and spiritual beliefs (Arnett, 2000; Gutierrez & Park, 2015; Lefkowitz, 2005). However, previous research suggests well-adjusted college students engage in religious practices or have spiritual beliefs in a transcendent reality that are associated with more positive views of the self than groups of students characterized predominantly by externalized, risky behaviors or internalized, emotional distress (Nelson & Padilla-Walker, 2013). Additionally, Oman and Thoresen (2003) contend that spiritual beliefs will be considered valuable if they transfer into success in the secular world. The current findings that traits learned from a spiritual model were beneficial in a collegiate outcome may discourage students from abandoning faith, and encourage an evolving, eclectic, and useful spiritual worldview that contributes to positive development (Arnett, 2002).

Limitations and Future Directions

Limitations to the study were due to the sample and the narrow scope of the study. First, convenience sampling was used to gain participants in psychology and educational psychology courses. While psychology is part of a core curriculum and many students take at least one psychology class, participants in the survey were disproportionately education and psychology majors. Due to the plethora of research on the psychological benefits of spirituality, psychology majors may be more intentional about maintaining spiritual supports and a spiritual worldview. Also, participants from the private, religiously affiliated university endorsed Christianity as their

religion. Similarly, a large percentage of participants from the public university also endorsed Christianity as their religion. The high percentage of Christians at the public university was unexpected, considering that inclusion of spiritually diverse participants is part of the culture of the university and was part of the rationale for the large sample from two universities. Although a small percentage of participants endorsed other religions, it is unknown how a more nationally representative sample of religious students would impact the results. Finally, the study was conducted in the Mid-South, a region of the United States that is known for religious emphasis, particularly among Christians. Therefore, it is unknown how a nationally representative sample would compare by having more participants who endorse spirituality without religion.

Conceptually, this study was limited by the mediators chosen. While spirituality, mindfulness, hope, and forgiveness are malleable traits that help individuals cope and are associated with college self-efficacy, these do not represent an exhaustive list of potential mediators. Future studies could test gratitude, humility, wisdom, and grace as mediators of the path from environmental support from spiritual models to college self-efficacy. Additionally, participants reported how often they saw the community spiritual model, but participants did not report the amount of time spent in one-on-one interaction with the community spiritual model. Future studies can be more specific about the time spent in one-on-one interaction, which may account for the lack of contribution to mindfulness, forgiveness, and hope made by the spiritual model. Future qualitative studies could examine the types of disclosures learners report making as well as disclosures reportedly made by the model, and how these disclosures influence the development of spirituality, mindfulness, forgiveness and hope. Additionally, because learners may not take away accurate interpretations of information disclosed by a spiritual model, qualitative studies could examine the spiritual model’s perspective of what the learner could

have gained from an exchange compared to what the learner actually reports gleaning from the spiritual model.

Although testing the hypotheses in the current study involved analyzing spirituality, forgiveness, hope, and college self-efficacy using total scores, future analysis could examine paths involving the spiritual transcendence and religious involvement subscales of spirituality, the forgiveness of self, others, and situations subscales of forgiveness, the agency and pathways subscales of hope, and the academic, roommate, and social subscales of the college self-efficacy inventory.

Finally, a limitation of the study involves group differences within the sample. Participants from the private, religious-affiliated university reported higher levels of support from spiritual models, spirituality, and college self-efficacy than participants from the public university. These group differences are understandable, considering the culture of the religiously affiliated university centers around spiritual practices, which can be learned through response facilitation (Schunk, 2020). Additionally, students from the religious university may encounter more individuals who serve as spiritual models, such as faculty and staff, in addition to clergy. Similarly, associations have been found between religious support and religiosity related to various types of self-efficacy, which provides support for the higher group average in college self-efficacy for the private religious university as opposed to the public university (Abdel-Khalek & Lester, 2017; Duffy & Lent, 2008). In contrast, the current study showed that participants from the public university reported significantly higher levels of perspective-taking than participants from the private university. Participants from the religious university may be constantly exposed to one type of ideology that is expected to be taken literally; whereas students in the public university are likely to encounter a vast array of spiritual beliefs and practices.

Experiencing diversity in the university setting may lend itself toward a more symbolic interpretation of spiritual contents rather than a literal one, which has been associated with higher perspective-taking (Duriez, 2004). Considering the small to moderate effect size differences between the participants in the public and private universities on environmental support from spiritual models, spirituality, perspective-taking, and college self-efficacy, future analyses of the data may be conducted using multigroup analyses to see if there are group differences in the modeling.

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Appendix A

Scales

From the **Spiritual Modeling Inventory of Life Environments**

Religious/Spiritual Organization

Consider the religious or spiritual organizations (if any), such as congregations, faith communities, or retreat centers with which you are involved with in the present. These places could include groups in your family, community, work, or school where you interact with an individual who you consider to be more spiritual than you are.

Please think about the person who for you demonstrates spiritual skills (if several people are equally good examples, pick ONE of them).

What is this person in relationship to you (please check only ONE)?

1. Minister, pastor, priest, rabbi, or other local congregational leader
2. Other staff member of a local congregation
3. Spiritual director
4. Other staff member at a monastery/spiritual retreat center
5. Fellow member from a local congregation (perhaps a friend or mentor, not on staff)
6. Fellow member not part of your local congregation (perhaps a friend or mentor)
7. Other: ___________

What spiritual skills does this person demonstrate highly (i.e. making him/her a good model? Please circle all that apply, or else check "none."

1. Hope
2. Forgiveness
3. Fairness

4. Faith in a higher power
5. Patience
6. Courage
7. Truthfulness
8. Faith in a universal moral order
9. Compassion
10. Persistence
11. Humility
12. Discernment (good judgment)
13. Gratitude
14. Self-control
15. None

How often do you see this person?

1. Almost every day
2. Once or twice a week
3. Once or twice a month
4. A few times per year
5. Once every year or two
6. Once every three years or less often
7. He/she is no longer alive

Keeping in mind the characteristics of this person that make them a spiritual example, please answer the following question: How often do you witness his/her positive spiritual example in

various kinds of situations? 1 = often, 2 = sometimes, 3= occasionally, 4 = never, 5 = does not apply

1. When she/he helps resolve conflicts (or potential conflicts) between other people.
2. When she/he tells stories or talks about her/his experiences or the experiences of others – there's just something inspiring about how her/his mind works.
3. When we discuss my personal problems and aspirations.
4. When we discuss congregational, organizational, or social issues.
5. When we are working together on a project.
6. When we engage together in worship services or other spiritual practices.
7. When other people tell me about what she/he has done.
8. Even beyond how she/he acts in one situation, it's also his/her consistent dedication to what's important.

Famous and/or divine persons

Consider famous people that you have heard about – perhaps through family, friends, the media or a religious organization. Please consider either famous people who are alive now, or famous people from the past, including people that some consider to be divine (such as Jesus or the Buddha).

Name of famous/divine person: _________

What spiritual skills does this person demonstrate highly (i.e. making him/her a good model)? Please circle all that apply, or else check "none."

1. Hope
2. Forgiveness
3. Fairness

4. Faith in a higher power
5. Patience
6. Courage
7. Truthfulness
8. Faith in a universal moral order
9. Compassion
10. Persistence
11. Humility
12. Discernment (good judgment)
13. Gratitude
14. Self-control
15. None

How often do you hear about this person or discuss them with someone else?

1. Almost every day
2. Once or twice a week
3. Once or twice a month
4. A few times a year
5. Once every year or two
6. Once every three years or less often

Keeping in mind the characteristics of this person that made them a spiritual example, please answer the following question: For this person's ability to inspire you, how important are the following? 1 = often, 2 = sometimes, 3= occasionally, 4 = never, 5 = does not apply

1. How she/he helps resolve conflicts (or potential conflicts) between other people.
2. His/her writings or speeches – there's just something inspiring about how her/his mind works.
3. What he/she says about problems and aspirations of people like me.
4. When she/he says about broader social issues.
5. My experience of working in an organization founded or supported by this person.
6. When other people tell me about what she/he has done.
7. Even beyond how she/he acts in one situation, it's also his/her consistent dedication to what's important.

Spirituality

Assessment of Spirituality and Religious Sentiments – Self Report, Short Form (ASPIRES-SF)

1. Age: ________
2. Gender:
    a. Female
    b. Male
3. Race/Ethnicity
    a. American Indian/Native American
    b. African American/ Black
    c. Caucasian/ White
    d. Hispanic/ Latino(a)
    e. Asian/ Pacific Islander
    f. Middle Eastern
    g. Other: ______________

4. Religious affiliation:
    a. Catholic
    b. Lutheran
    c. Methodist
    d. Episcopal
    e. Unitarian
    f. Baptist
    g. Presbyterian
    h. Mormon
    i. Other Christian, please specify: _______________
    j. Jewish
    k. Muslim
    l. Hindu
    m. Buddhist
    n. Atheist/ Agnostic
    o. Other Faith Tradition, please specify: _____________

Instructions: This questionnaire will ask you about various perceptions you hold about your view of the world and your place in it. Answer each question on the scale provided by checking the response that best expresses your feelings. If you are not sure of your answer or believe that the question is not relevant to you, then mark the "Neutral" category.

Please work quickly, do not spend too much time thinking about your responses to any single item. Usually, your first answer is your best response, so go with your first reaction to the item.

Responses range from Never, About once or twice a year, several times a year, about once a month, 2 or 3 times a month, nearly every week, several times a week.

Section I.

1. How often do you read the Bible/Torah/Koran/Geeta?
2. How often do you read religious literature other than the Bible/Torah/Koran/Geeta?
3. How often do you pray?
4. How frequently do you attend religious services?

Section II. Responses range from strongly agree, agree, neutral, disagree, strongly disagree

1. In the quiet time of my prayers and/or meditations, I find a sense of wholeness.
2. I have done things in my life because I believed it would please a parent, relative, or friend that had died.
3. Although dead, memories and thoughts of some of my relatives continue to influence my current life.
4. I find inner strength and/or peace from my prayers and/or meditations.
5. I do not have any strong emotional ties to someone who has died.
6. There is no higher plane of consciousness or spirituality that binds all people.
7. Although individual people may be difficult, I feel an emotional bond with all of humanity.
8. My prayers and/or meditations provide me with a sense of emotional support.
9. I feel that on a higher level all of us share a common bond.

Forgiveness

Heartland Forgiveness Scale:

Directions: In the course of our lives negative things may occur because of our own actions, the actions of others, or circumstances beyond our control. For some time after these events, we may have negative thoughts or feelings about ourselves, others, or the situation. Think about how you typically respond to such negative events. Next to each of the following items write the number (from the 7-point scale below) that best describes how you typically respond to the type of negative situation described. There are no right or wrong answers. Please be as open as possible in your answers. 1- almost always false of me, 3 more often false of me, 5- more often true of me, 7 almost always true of me

1. Although I feel badly at first when I mess up, over time I can give myself some slack.
2. I hold grudges against myself for negative things I've done.
3. Learning from bad things that I've done helps me get over them.
4. It's really hard for me to accept myself once I've messed up.
5. With time I am understanding of myself for mistakes I've made.
6. I don't stop criticizing myself for negative things I've felt, thought, said, or done.
7. I continue to punish a person who has done something that I think is wrong.
8. With time I am understanding of others for the mistakes they've made.
9. I continue to be hard on others who have hurt me.
10. Although others have hurt me in the past, I have eventually been able to see them as good people.
11. If others mistreat me, I continue to think badly of them.
12. When someone disappoints me, I can eventually move past it.
13. When things go wrong for reasons that can't be controlled, I get stuck in negative thoughts about it.

14. With time I can be understanding of bad circumstances in my life.
15. If I am disappointed by uncontrollable circumstances in my life, I continue to think negatively about them.
16. I eventually make peace with bad situations in my life.
17. It's really hard for me to accept negative situations that aren't anybody's fault.
18. Eventually I let go of negative thoughts about bad circumstances that are beyond my control.

Cognitive and Affective Mindfulness Scale - Revised

Instructions:

People have a variety of ways of relating to their thoughts and feelings. For each of the items below, rate how much each of these ways applies to you. 1 = rarely/not at all, 2 = sometimes, 3 = often, 4 = almost always

1. It is easy for me to concentrate on what I am doing.
2. I am preoccupied by the future.
3. I can tolerate emotional pain.
4. I can accept things I cannot change.
5. I can usually describe how I feel at the moment in considerable detail.
6. I am easily distracted.
7. I am preoccupied by the past.
8. It's easy for me to keep track of my thoughts and feelings.
9. I try to notice my thoughts without judging them.
10. I am able to accept the thoughts and feelings I have.
11. I am able to focus on the present moment.

12. I am able to pay close attention to one thing for a long period of time.

Hope

Adult Hope Scale

Directions:

Read each item carefully. Using the scale shown below, please select the number that best describes YOU and put that number in the blank provided. 1 = definitely false, 2 = mostly false, 3 = somewhat false, 4 = slightly false, 5 = slightly true, 6 = somewhat true, 7 = mostly true, 8 = definitely true.

1. I can think of many ways to get out of a jam.
2. I energetically pursue my goals.
3. I feel tired most of the time.
4. There are lots of ways around any problem.
5. I am easily downed in an argument.
6. I can think of many ways to get the things in life that are important to me.
7. I worry about my health.
8. Even when others get discouraged, I know I can find a way to solve the problem.
9. My past experiences have prepared me well for my future.
10. I've been pretty successful in life.
11. I usually find myself worrying about something.
12. I meet the goals that I set for myself.

Perspective-taking

Perspective-taking subscale of the Interpersonal Reactivity Index

Read each of the following statements and rate how well each of them describes you.

Please check the box that corresponds to the number which applies to you for each item: 0- Does not describe me well, 4- describes me well

1. Before criticizing somebody, I try to imagine how I would feel if I were in their place.
2. If I'm sure I'm right about something, I don't waste much time listening to other people's arguments
3. I sometimes try to understand my friends better by imagining how things look from their perspective.
4. I believe that there are two sides to every question and try to look at them both.
5. I sometimes find it difficult to see things from the "other guy's" point of view.
6. I try to look at everybody's side to a disagreement before I make a decision.
7. When I'm upset at someone, I usually try to "put myself in his shoes" for a while.

College Self-Efficacy

College Self-Efficacy Inventory

The following 20 items concern your confidence in various aspects of college. Using the scale below, please indicate how confident you are that you could successfully complete the following tasks. If you are extremely confident, mark a 10. If you are not at all confidence, mark a 1. If you are more or less confident, find the number between 10 and 1 that

best describes you. Item responses are aggregated across all student respondents in order to better understand how confident the average student feels. Levels of confidence vary from person to person, and there are no right or wrong answers; just answer honestly. 1- not at all confident, 10- extremely confident

1. Make new friends at college.
2. Divide chores with others you live with.

3. Talk to university staff.
4. Manage time effectively.
5. Ask a question in class.
6. Participate in class discussions.
7. Get a date when you want one.
8. Research a term paper.
9. Do well on your exams.
10. Join a student organization.
11. Talk to your professors.
12. Join an intramural sports team.
13. Ask a professor a question
14. Take good class notes.
15. Get along with others you live with.
16. Divide space in your residence.
17. Understand your textbooks.
18. Keep up to date with your schoolwork.
19. Write course papers.
20. Socialize with others you live with.

Appendix B

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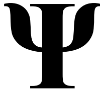

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PERMISSION AGREEMENT

Dear Ms. Carter:

In response to your recent request, permission is hereby granted to you, Molly Carter, to use the *Assessment of Spirituality and Religious Sentiments* (ASPIRES) scale: short form, in your study, entitled, "Spiritual Learning and College Self-Efficacy" subject to the following restrictions:

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BY:

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Date: July 22, 2019

PRINTED NAME: __________Mollie Carter, MA______________________

I N V O I C E

TO: Molly Carter

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Description	Amount
200 ASPIRES short forms @ .50 ea. Shipping & Handling	100.00 15.00
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PO Box 5334
Timonium, MD 21094

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Appendix C

IRB Approval

I was covered under University of Memphis IRB# PRO-FY2019-627.

I was covered under Union University IRB# 0719-01170.