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# Ignatian Spirituality in Vocational Career Development: An Experimental Study of Emerging Adults

Scott Campanario

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Ignatian Spirituality in Vocational Career Development:  
An Experimental Study of Emerging Adults

Scott C. Campanario

A dissertation submitted in partial fulfillment

of the requirements for the degree of

Doctor of Philosophy

in

Industrial-Organizational Psychology

Seattle Pacific University

07/25/2018

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To the family and friends who have filled my life with love, support, laughter, and joy. There is no doubt in my mind that I would not be here without your presence and thoughtful vocational counseling in my life.

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The ancient Greeks have a word to describe transformation on a spiritual level, beyond mere change or evolution: *metanoia*. Loosely translated as a transformation of heart or a spiritual conversion, this word often comes to mind when I think of my experience at Seattle Pacific University (SPU). This journey was not simply one of personal change; it was a deeply spiritual and holistic transformation that emerged when tremendous challenge was met with tremendous support, investment, and love from those around me—a love I want to acknowledge here.

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## Abstract

Traditional undergraduate students fall in an age range known as emerging adulthood, a development stage of life characterized by freedom and exploration in pursuit of understanding one's identity. This is an important developmental process because a failure to discern this identity and what one finds meaningful can be associated with numerous harmful outcomes such as depression, anxiety, and substance abuse. Conversely, coming to a better understanding of one's identity is also associated with the number of positive outcomes such as hope, life satisfaction, and career planning. Therefore, institutions of higher education have both an opportunity and an obligation to consider how to best support and guide their students through this identity exploration. As such, the purpose of this study is to evaluate one approach for doing just that. In the current investigation, I examined the causal relationship between student involvement in spirituality-infused vocational career development (VCD) and the vocational outcomes of purpose, vocation, and calling. To better understand this effect, I explored self-concept clarity, career-decision self-efficacy, and knowledge of occupational information as explanatory mechanisms for this relationship. Participants were 127 undergraduate students at a private, Christian University in the Pacific Northwest. Students were randomly assigned to one of three VCD conditions: a control group, a condition that offered students only traditional VCD activities, and a spirituality-infused VCD condition that included both the traditional VCD activities and five discernment/spirituality-related discernment activities. Results indicated that participation in the spirituality-infused VCD intervention led to significantly higher post-test scores for sense of purpose compared to students in the traditional VCD condition ( $B = -0.326, p = .014$ ). Likewise, participation in the spirituality-infused VCD intervention led to significantly higher post-test scores for presence of calling compared to students in the traditional VCD condition ( $B = -0.226, p = .015$ ); this analysis was approaching significance when comparing

these students to those in the control group ( $B = -0.176, p = .053$ ). Mediation analyses revealed that self-concept clarity was approaching significance when comparing those in the spirituality-infused VCD condition to those in the control group ( $B_{ab} = -0.091, p = .053, 90\% \text{ CI} = -0.189 \text{ to } -0.008$ ), and trending toward significance when comparing those in the spirituality-infused VCD condition to those in the traditional VCD condition ( $B_{ab} = -0.085, p = .072, 90\% \text{ CI} = -0.184 \text{ to } -0.002$ ). Finally, one additional indirect effect that was trending toward statistical significance occurred when comparing the control group to the spirituality-infused VCD condition in the model with career decision self-efficacy as a mediator to sense of purpose ( $B_{ab} = -0.085, p = .080, 90\% \text{ CI} = -0.185 \text{ to } -0.001$ ). The findings from this research suggest that that the infusion of spiritual discernment practices into vocational counseling interventions can significantly enhance the effectiveness of those interventions. This information can be used to inform how higher education institutions support students in their career decision-making and discernment.

*Keywords:* vocational career development, vocational counseling, purpose, vocation, calling, self-concept clarity, career decision self-efficacy, occupational information, emerging adults

## CHAPTER I

### Introduction

Consider the traditional undergraduate student. Freshly graduated from a high school education system of rigidity and structure, these students enter into a space of profound freedom and autonomy in higher education. With this freedom, however, also comes expectations of self-sufficiency and responsibility. Moreover, while navigating this tension between freedom and responsibility, these students deal with increased social expectations to discover their identities, often in terms of a career path. These social pressures and expectations can present students with a tremendous amount stress in their development, revealing both an opportunity and obligation for higher education institutions to provide support. The obligation for higher education institutions comes from the multitude of risks associated with not finding a sense of purpose or meaningful identity in emerging adulthood. For instance, individuals who do not experience a sense of purpose or meaning are at a higher risk of stress (Steger & Frazier, 2005), depression (Mascaro & Rosen, 2005), anxiety (Bigler, Neimeyer, & Jess, 2001), suicidal behaviors (Bonner & Rich, 1987; Kinnier et al., 1994), and substance abuse (Coleman, Kaplan, & Downing, 1986; Newcomb & Harlow, 1986; Schlesinger, Susman, & Koenigsberg, 1990).

On the other hand, the opportunity for higher education institutions can be seen in the numerous benefits associated with these vocational outcomes. For example, the presence of a purpose or sense of meaning is associated with effective coping abilities (Edwards & Holden, 2001; Stevens, Pfof, & Wessels, 1987), happiness (Bronk, 2014; French & Joseph, 1999), hope (Bronk, Hill, Lapsley, Talib, & Finch, 2009), life satisfaction (Peterson, Park, & Seligman, 2005), self-efficacy (DeWitz, Woolsey, & Walsh, 2009), and clarity in terms of career planning (Tryon & Razdin, 1972). In addition, the perception of a “calling,” another important vocational outcome, has also been shown to predict well-being, job satisfaction, work engagement, career

and organizational commitment, and career-decision self-efficacy (Byron & Perrin, 2009; Dik & Steger, 2008; Duffy, Allan, & Bott, 2012; Duffy, Allan, Autin, & Bott, 2012; Duffy, Bott, Allan, Torrey, & Dik, 2012; Duffy, Dik, & Steger, 2011; Duffy, Manuel, Borges, & Bott, 2011; Hirschi & Hermann, 2013; Steger et al., 2010).

Given the value of cultivating these vocational outcomes, faculty and administrators in higher education institutions should be invested in providing students with guidance and resources for fostering vocational outcomes. The pressing question for these institutions, then, should be a matter of *how* to provide this support, which necessitates the study of best practices for cultivating vocational outcomes for their students. To elaborate, in order to counsel emerging adults in career discernment, one must not only understand vocational counseling, but also the unique experiences and needs of undergraduate students. Within the past 20 years, lifespan psychologists have given much attention to these experiences and needs of undergraduate students, culminating in the identification of a new stage of development termed emerging adulthood (Arnett, 2000a, 2004). As I will describe in the following review, Arnett (2004, 2006) suggested that these individuals face unique experiences and developmental processes that require a tailored approach to vocational career development (VCD) for emerging adults.

In addition to understanding the uniqueness of emerging adults, it is also important to understand the richness of vocational outcomes like meaning, purpose, vocation, and calling. The definitions of these concepts will be described in greater detail in a later section, but of importance here is the point is that a calling in particular reflects an openness to and participation with the transcendent—a caller (Dik & Duffy, 2009). This aspect of calling presents one additional discipline that can be added to this multidisciplinary approach to VCD. Specifically, the effort to provide VCD to emerging adults can also benefit from the integration of theology

and spirituality. Theological scholarship on the topics of calling and vocation is far from young (see Dik & Duffy, 2009; Placher, 2005). Within psychology, however, the empirical study of integrating spirituality into VCD is much more recent (Dik & Duffy, 2009; Duffy & Dik, 2013). A few examples include Dik and Steger's (2008) research on the role of "calling-infused" counseling on career-decision self-efficacy; Byron and Perrin's (2009) study suggesting that purpose mediates the relationship between faith and well-being; and Duffy and Sadlacek's (2010) work demonstrating a small relationship between a calling and religiousness. These are only three of the few studies suggesting that theological concepts play a role in VCD, presenting a much-needed continued exploration of the mechanisms of faith, religiousness, and spirituality as resources in VCD.

The purpose of this study is to respond to this need by evaluating a program that integrates spirituality into the multidisciplinary study VCD. Specifically, I examine the causal relationship between student involvement in a spirituality-infused VCD program and the vocational outcomes of purpose, vocation, and calling. To better understand how this program impacts such outcomes, I explore self-concept clarity, career-decision self-efficacy, and knowledge of occupational information as explanatory mechanisms for this relationship (see Figure 1 below). Findings from this research can inform how higher education institutions support students in their career decision-making and discernment. As such, I will review the current literature on emerging adulthood, VCD counseling, and the role of spirituality in this research. Additionally, I will provide several research hypotheses and descriptions of the experimental design and measures, which will inform the forthcoming data analyses and conclusions of this study for future research on VCD for emerging adults.



### **Literature Review**

What exactly is a calling? What is a sense of purpose? Are those conceptually different from a vocation? And, why do the definitions of these outcomes matter for students discerning career paths? These are but a few of the many questions addressed in the following literature review. However, before diving into these vocational terms, one must first understand the uniqueness of the undergraduate emerging adult; without understanding the unique context of these individuals, a conversation of how to best use VCD to support them lacks the relevance to be meaningful. Thus, I will begin this review by describing the unique qualities of emerging adulthood, followed by a discussion of VCD theories, interventions, and mediators. Finally, I will conclude with a discussion of the role of spirituality in VCD.

#### **Emerging Adulthood: A Review**

“In the social jungle of human existence, there is no feeling of being alive without a sense of identity” (Erikson, 1968, p. 38). Several decades ago, psychologist Erik Erikson (1958, 1963, 1968) offered this quote in his lifespan psychosocial theory of human development, which would become a guiding framework for subsequent work in lifespan psychology (e.g., Marcia, 1983; Rosenthal, Gurney, & Moore, 1981; Schwartz, Zamboanga, Luyckx, Meca, & Ritchie, 2013). Erikson (1968) believed that, between ages 12 to approximately 35, individuals would undergo initial attempts to more deeply understand themselves and find intimacy with others. Though Erikson’s (1968) work is well-renowned and widely referenced, it is noticeably outdated for a number of reasons.

First, there was a salient scarcity of women and people of color in academic and social institutions during Erikson’s (1968) research, raising questions about how equitable or culturally responsive his findings and eventual framework are for the more diverse academic settings of the modern era. Second, Schwartz et al. (2013) described how societal pressures and norms in

politics, religion, and sexuality have shifted tremendously since the initial theory, adding further nuance to the exploration and opportunities that students have during their time of development. These differences are important; yet, perhaps most relevant to this study, are two additional changes since Erikson's (1968) time that have created a unique social context for emerging adults in the 21st century, as discussed below. As I will describe below, these two changes are the increased social expectations of attending higher education and the decreased social expectation of career decidedness while in higher education, both of which have created a unique context for emerging adults in the modern era.

**The unique context of emerging adults in the 21st century.** Emerging adults in the 21st century face much less salient social expectations than those in the 1950s and 1960s. Côté (2006) made a compelling argument that the current era of vocational career counseling has seen an increasingly postmodernist worldview that deemphasizes the importance of role fulfillment and adult identity. For example, this worldview might include well-intentioned comments from a student's faculty advisor such as, "You can always change your career choice," or, "You don't need to make a career decision now." These sentiments may be helpful when change is necessary, or anxiety is preventing a firm decision, but the unintended consequence of this message is the discouragement of a firm sense of identity and career decidedness. In other words, emerging adults in the 21st century have far less reinforcement of establishing an adult identity via career and life decisions (Côté, 2000, 2006; Gergen, 1991; Giddens, 1991). Therefore, they are arguably in most need of VCD to encourage discernment and career decision-making.

Additionally, the early 21<sup>st</sup> century also brought with it a new societal pressure to enroll into higher education upon completing high school. In Erikson's (1968) time, men were far more likely to enter the workforce and women to take on traditional household roles following high

school (Schwartz et al., 2013). Since then, higher education has seen an influx in attendance due to (a) increased competition in the job market driving demand for higher education as a way of becoming more employable (Côté, 2006); (b) government subsidies designed to empower lower-income and marginalized groups to enroll in higher education; and (c) increased access and encouragement for women and international students to attend higher education (National Center on Education Statistics, 2017).

This influx and new social expectation of attending higher education (Schwartz et al., 2013), coupled with the postmodernist worldview of delaying career decisions and role fulfillment (Côté, 2000, 2006), prolonged the transition from adolescence to young adulthood. It created a 4-6-year stage of development in higher education where individuals were primarily away from their family but not yet creating a family of their own (Aquilino, 2006); substantially more autonomous but not self-sufficient (Arnett, 1998; Côté, 2006); and searching for a career as a path to a more fruitful and meaningful life as opposed to a way of meeting basic needs and providing for a family (Hamilton & Hamilton, 2006). At the closing of the 20<sup>st</sup> century, lifespan psychologists were studying these trends (Arnett, 1994, 1997, 1998), and shortly thereafter, Arnett (2000a) called for the labeling of this new stage “emerging adulthood.” The unique characteristics of this stage are discussed in detail in the following sections.

**Arnett’s (2006) five unique characteristics of emerging adults.** Arnett’s (2000a) identification of this new developmental stage required subsequent research to identify the specific qualities and experiences of an emerging adult. This work ultimately resulted in a set of five qualities thought to characterize emerging adulthood (Arnett, 2006; Reifman, Arnett, & Colwell, 2007). Understanding these five characteristics is important for VCD because they inform the value and the role of VCD for this audience. As such, these five qualities are

discussed in the following pages, followed by two additional characteristics relevant to this study.

***Characteristic #1: Experimentation and identity exploration.*** Arnett (2006) described emerging adulthood as the stage of identity experimentation and exploration largely because it is one of the few moments when individuals have the opportunity to engage in identity discernment with minimal attachment and commitment to their decisions. In particular, the emerging adult in higher education experiences freedom from familial attachments and responsibilities while at the same time not yet having the commitments that characterize adulthood. As such, they find themselves with substantial opportunity to explore and experiment with minimal commitment or obligation. This allows emerging adults to engage in an identity moratorium (Kroger & Marcia, 2011; Marcia, 1966), a process of exploration with minimal obligations (Schwartz et al., 2013).

However, upon closer examination of this identity moratorium, it becomes clear that the process does not always resolve to well-being and identity, nor does it transpire in the same way for each person. For instance, identity exploration for some can quickly turn to rumination and fear of not cultivating an identity; for others, a lack of structure and motivation to explore an identity may be the culprit preventing well-being (Luyckx, Goossens, Soenens, Beyers, & Vansteenkiste, 2005). Similarly, identity exploration can also cause anxiety if it is perceived as a threat to the values or practices that one previously held in adolescence or childhood (Meeus, 1996; Meeus, Van de Schoot, Keijsers, Schwartz, & Branje, 2010). In summary, emerging adults might experience anxiety, stress, or rumination if their exploration lacks structure and guidance for discernment. This makes participation in VCD activities particularly valuable for emerging adults because it provides the structured guidance to facilitate a healthy exploration and discernment of one's identity, mitigating the indecision that can harm one's well-being.

*Characteristic #2: Instability and change.* Arnett (2006) also described emerging adulthood as a period of change and instability. For instance, these individuals undergo frequent changes in residence, moving from childhood homes into dormitories, followed by moves to off-campus housing and new cities upon graduating, accepting a job opportunity, or cohabitating with others. In other words, whereas the first 18 years of one's life are usually quite stable with infrequent changes in residence, the emerging adult has the opportunity and willingness to make changes to his or her residential place of stay. This instability is not only present in residential preferences, but also in relationship decisions. For instance, Smith, Christoffersen, Davidson, and Herzog (2011) suggested that emerging adults engage in dating and sexual relationships in a highly variable manner. They rarely enter dating relationships with expectations of marriage or long-term commitment. Instead, they approach dating as a series of short-term "trial-runs" to assess if a person is well-suited for longer-term commitment. If he or she is not, emerging adults are quick to change and try again. Smith et al.'s (2011) review might be somewhat pessimistic, but it highlights another facet of the instability that Arnett (2006) described.

At least in the context of career decisions, this instability and change presents a number of harmful implications for organizations. Specifically, higher instability and willingness to change occupations translates to increased rates of voluntary turnover for organizations. This voluntary turnover brings both direct and indirect costs of rehiring, retraining, and potential losses to an organization's morale and culture (Cascio, 1991; Tziner & Birati, 1996)—costs that can range from 50% to 200% of an employee's annual salary (Cascio, 2006; Mitchell, Holtom, & Lee, 2001). These harmful consequences beg further research on how educators can use VCD resources to facilitate exploration in work, life, and relationship preferences that improves career decidedness for emerging adults.

*Characteristic #3: Self-focused but not selfish.* A third quality unique to this age range is a salient focus on self-development. Arnett (2007) cautioned against the conclusion that this self-focus equates to selfishness, however. Selfishness is defined as a desire for serving oneself disregarding or even at the expense of the well-being of others, such as being exploitative, narcissistic, materialistic, and greedy (Crocker, Canevello, & Brown, 2017). In other words, key to the definition of selfishness is a disregard for the well-being of others. Though some believe selfishness is intrinsic to humanity (Miller, 1999), Arnett (2007) suggested that the label is erroneously applied to emerging adults in particular due to their increased focus on self-development. This label is erroneous because, unlike selfishness, the emerging adult's focus on self-development reflects a preparation to enter society as a mature adult, ready to serve a community via an established role.

To elaborate, in transitioning to higher education, emerging adults experience freedom from the rules, obligations, and norms of their previous contexts. This provides them with the space to look inward at who they are and the principles by which they intend to live (Arnett, 1998; Larson, 1990). Such an inward examination requires a deep reflection and focus on the self, specifically on how to develop into a mature role where one be a responsible and self-sufficient contributor to society (Reifman et al., 2007). It can be easy to confuse this inward examination as selfishness or self-interest, but the more fitting term is self-focus. In fact, evidence suggests that emerging adults actually are very minimally selfish as they display higher rates of volunteer service, lower levels of egocentrism, and an increased propensity for viewing matters from the point of view of others (Arnett, 2004; Labouvie-Vief, 2006).

Professors and administrators in the higher education context should be well-aware of this quality because they are in a position of tremendous influence and guidance as students

focus on self-development. Because these educators have such influence, expanded research on VCD can be used to inform both the conversations that educators are having with their students and the discernment tools and resources they provide in the process.

*Characteristic #4: Feeling “in-between.”* A fourth unique quality of emerging adulthood is what Arnett (2006) termed the feeling of being “in-between.” In his research on emerging adults, Arnett (2001) noted that approximately 60% of emerging adults feel that they have reached adulthood in some ways, but not in other ways—in other words, they are not quite adults but are no longer adolescents. In unpacking this feeling, Arnett’s (1994, 1997, 1998, 2001, 2003) prior research alongside international research (e.g., Facio, Resett, Micocci, & Mistrorigo, 2007; Piumatti, Garro, Pipitone, Di Vita, Rabaglietti, 2016; Tagliabue, Crocetti, & Lanz, 2016) suggests that there are both subjective and objective indicators of adulthood for emerging adults. Subjective indicators might include feeling like one can make independent decisions or be financially responsible (Arnett, 2006); objective indicators might include transitions such as completing higher education, becoming married, or starting a new career (Modell, Furstenberg, & Hershberg, 1976). This research suggests that, between these two indicators, subjective criteria for adulthood are ranked as being more important for one’s transition into adulthood.

As Arnett (2006) described, subjective metrics are not specific transition events, but rather a perceptive sense of one’s capacity as a human. For this reason, these subjective criteria are likely reached over a period of time, as opposed to at one given moment in life such as at the completion of one’s higher education. As such, this slow transition means that emerging adults are neither adolescent nor adult, but rather working toward a sense of responsibility and independence—they are “in between” stages. The nature of this process being one of “working toward” a distal goal of responsibility and independence requires motivation and guidance, a

need that VCD research can fill with extended study of the strategies for finding careers that allow for greater responsibility and independence. An awareness of this need is necessary for educators hoping to both use VCD tools for facilitating the achievement of these goals.

*Characteristic #5: Optimism for one's future.* The final quality of emerging adulthood identified by Arnett (2006) and reiterated elsewhere (Reifman et al., 2007) is both an optimism about the future and a sense that one's future is filled with various possibilities. Arnett (2006) suggested that the optimism about marriage and careers largely stems from the fact that these optimistic hopes haven't happened yet. In other words, emerging adults have no counterfactual upon which to say that these things likely will not transpire. Still, he notes that even emerging adults living in lower SES conditions experience this same optimism about the future, at times even greater than those with higher SES statuses (Arnett, 2000b). The notion of perceived possibilities that many emerging adults experience largely ties back to the transition from childhood upbringing to the freedom of this age range. Specifically, as emerging adults become free from the rules and norms set by their parents, they begin to pursue their own interests, sparking an imagination about the many possibilities the future might hold.

This optimistic attitude of future possibilities is important for educators hoping to use VCD strategies because it can be leveraged to facilitate divergent thinking. If emerging adults are optimistic about the future and can envision many different possibilities, then educators can facilitate that thinking to spur reflection on which futures might be a meaningful path for the student. The evaluation of VCD strategies in this process can be helpful as it can inform how educators go about encouraging creative and open-minded consideration of one's future. Overall, these five qualities represent the five characteristics identified by Arnett (2000a, 2006) in pioneering his theory of emerging adulthood. That said, other scholars have noted additional



qualities of this audience that may bear implications for the remainder of this study. As such, a brief discussion of these additional qualities is provided in the subsequent two sections.

**The importance of intrinsic work values in emerging adulthood.** In addition to Arnett's (2000a, 2006) theory of emerging adulthood, Jin and Rounds (2012) have also noted that emerging adults place noticeably more emphasis on intrinsic work values as opposed to extrinsic work values. Extrinsic work values might resemble material or status outcomes such as pay, title, or promotions, and intrinsic work values typically resemble preferences for growth, autonomy, and a feeling of meaningfulness associated with their work. The tendency for emerging adults to give greater consideration to intrinsic work values is an important characteristic for this study because it presents yet another compelling justification for the investment in VCD practices in the higher education context.

Specifically, VCD is unique from the traditional sense of career development in that its focus is placed largely on the vocation of the individual. Another term that has been used to describe this focus is the protean lens to career development (Briscoe & Hall, 2006; Hall & Mirvis, 1996). Whereas the approach of traditional career development may be more focused on a particular set of tools, the VCD or protean approach is broader in the sense that it aims for holistic or existential well-being via intrinsic desires for a sense of purpose or meaningfulness. For this reason, the preference of emerging adults to focus on intrinsic work values suggests that VCD practices may resonate with this audience particularly well.

**Changes in spirituality for emerging adults.** Lastly, one final quality of emerging adults relevant to this study is the pattern of change in spirituality. Spirituality is undoubtedly complex and multidimensional (Hill et al., 2000); moreover, many confuse it with the more institutionalized and organized practice of religion (Keonig, 2009). That said, spirituality is

typically conceptualized as one's approach in an individualistic, personal search for the transcendent or sacred (Barry, Nelson, Davarya, & Urry, 2010; Nadal, Hardy, & Barry, 2016), and scholars have begun to study how this search transpires for emerging adults.

In particular, though one recent study has suggested that spirituality tends to decrease for emerging adults (Hall, Edwards, & Wang, 2016), others have provided evidence that spirituality remains stable or can even grow stronger during this time (Astin, Astin, & Lindholm, 2011; Koenig, 2015; Williamson & Sandage, 2009). In either case, the point remains that, unlike religiousness (which tends to decrease for emerging adults; Hardie, Pearce, & Denton, 2016; Koenig, McGue, & Iacono, 2008), spirituality can remain stable or even increase for these individuals. This is relevant because spirituality is intrinsically oriented toward an individualized and personal search for the transcendent, a search that fosters the personal meaningfulness associated with vocational outcomes. In other words, if emerging adults are open to spirituality, VCD interventions can leverage this openness to facilitate a personal search for meaning.

**A summary of emerging adults.** In summary, the preceding discussion of qualities of emerging adults provides a comprehensive picture of the uniqueness of emerging adulthood as shown in in [Table 1](#) with brief descriptions. Across all of these characteristics, there is a common theme of the pursuit of understanding, a notion that Erikson (1968) described as a pursuit of one's identity. If a common theme in emerging adulthood is the pursuit of understanding one's identity, VCD can be a phenomenal tool for this group because its essential purpose is the support of career discernment and decision-making (Fouad, 2007). Therefore, this field of study is optimally suited for providing information, tools, and strategies for emerging adults in the midst of identity exploration, necessitating a discussion of key VCD theories, interventions, mediators, and outcomes, as discussed in the subsequent section.

### **A Bird's-Eye View of Key VCD Outcomes**

There are a multitude of key variables and outcomes in the current landscape of VCD research (see Bikos, Dykhouse, Boutin, Gowen, & Rodney, 2013; Fouad, 2007). In this study, however, one variable in particular is the overarching concept and common thread woven throughout the vocational outcomes measured in this study. This foundational idea is the concept of meaning, defined as a feeling that one's life and existence is significant beyond oneself (Steger, Frazier, Oishi, & Kaler, 2006). This feeling is embedded into the three vocational outcomes measured in this study: purpose, vocation, and calling. Although these terms are often used interchangeably in colloquial conversation, they represent conceptually distinct concepts (Dik & Duffy, 2009; Dik, Byrne, & Steger, 2013). Beginning with the concept of purpose, this notion dates as far back as Aristotle's (trans. 1999) *Nichomachean Ethics*, where he claimed that everything has a *telos*, a Greek term for purpose. For Aristotle, the pursuit and actualization of this *telos* was crucial for human flourishing and a deeper sense of meaning. Subsequent work has continued to implicate meaning in the definition of purpose, with one of the more widely used definitions of the construct being that it is a stable and overarching goal or intention to achieve something meaningful (Damon, Menon, & Bronk, 2003); in other words, purpose is a general goal toward something one finds meaningful.

For instance, a student might find organizational leadership meaningful, leading to an experienced sense of purpose as being a business leader. When this general goal becomes fairly more specific, as indicated by an identified approach or role to serve something beyond oneself, it is better thought of as a vocation. Dik and Duffy (2009) defined the concept of vocation as a specific role one takes on that is both other-oriented (i.e., motivated by a desire to impact something beyond the self) and provides a sense of meaning or purpose. Using the prior example

of becoming a business leader, a vocation might be the decision that it would be meaningful to become a senior manager for an organization that provides affordable clothing merchandise to a local community. In this example, the career is a specific role (i.e., a senior manager), oriented toward serving something beyond the self (i.e., affordable clothing merchandise for others), and is thought to be meaningful or purposeful; together, these components make it a vocation.

There is one additional quality that differentiates this vocation from what scholars term as a calling, and that quality is the idea of a transcendent summons. In other words, a calling is simply a vocation that one feels is transcendentally summoned by an external caller (Dik & Duffy, 2009). Using the same example of becoming a business manager, if this individual felt that something external (e.g., God, culture, tradition) was drawing him or her to this path, it could be conceptualized as a calling. Each of these definitions contain both conceptual overlap and distinctness, but the key components of each are listed in [Table 2](#).

Together, these outcomes represent a comprehensive understanding of what is important to an individual at an existential level, and how that individual plans to pursue work that is meaningful. This understanding fits squarely with the same form of understanding that emerging adults are pursuing and exploring. What remains, however, is a question of how VCD interventions can be used to guide this pursuit of understanding. Accordingly, the remainder of this review will consider the effectiveness of VCD interventions, their theoretical foundations, and the value of spirituality in their use.

### **A Review of VCD Effectiveness: Theory and Research**

There are four prominent theoretical perspectives in VCD research, as described in the following sections. These sections will be followed by a discussion of empirically demonstrated

best practices for VCD interventions. Finally, I will conclude by describing the mediating variables connecting VCD interventions to their vocational outcomes.

**Theoretical foundations for purpose, vocation, and calling.** As stated previously, the literature on purpose and meaning has a lengthy and rich history, going as far back as early Greek philosophy. The notions of calling and vocation, however, have only recently begun to garner attention in psychology research. That said, because all of these vocational outcomes rest on the same set of theoretical foundations, Dik, Duffy, and Elridge (2009) suggested that new theoretical perspectives are not necessary for thinking about calling and vocation. Rather, these outcomes complement and enrich the common paradigms already in use in VCD research. Dik et al. (2009) described four theories in particular that can be helpful for understanding these variables. As described in the following pages, these four theoretical foundations are trait-factor theories, developmental theories, social cognitive theories, and constructivist theories.

**Trait-factor theories.** One early theoretical foundation for VCD is the trait-factor perspective, which holds that career experiences are a product of person-environment (P-E) fit, or the degree of congruence between the individual and his or her work context. Though this view can be traced back to Frank Parsons's (1909) early vocational text, *Choosing a Vocation*, Phillips and Jome (2008) suggested that one of the most widely-used theoretical P-E fit theories in the modern era has been Holland's (1973) writings on matching personal interests with dimensions of work. Specifically, Holland (1985) proposed that both individuals and their contexts can be measured along six dimensions: artistic, social, conventional, enterprising, realistic, and investigative. According to this perspective, people pursue work contexts that align with their own personal preferences for these dimensions, and when they find such a match, they are said to experience "congruence." This congruence represents a successful career decision

according to trait-factor theorists, and it is believed to lead to both satisfaction and commitment. Holland's (1973, 1985) is not the only P-E fit model (e.g., Dawis, 1996; Gati, 1998; Muchinsky & Monohan, 1987; Spokane, Meir, & Catalano, 2000), but it has produced strong empirical evidence (Mount & Muchinsky, 1978; Spokane et al., 2000). Moreover, it provides at least one way to conceptualize how vocational outcomes emerge.

To elaborate, if a meaningful career requires congruence between one's personality and his or her work environment, then VCD activities that help one to better understand each of these aspects are valuable tools for discerning meaningful careers. For example, activities such as self-assessments (e.g., the IPIP-NEO from Costa & McCrae [1992]; or the virtues in action [VIA] assessment from Peterson and Seligman [2004]) help individuals to better understanding their personality. Likewise, activities such as job shadowing or informational interviews help one to better understand the environments in which they could potentially work. Together, both sets of activities help the individual to better understand themselves and their contexts—the person and the environment—thereby leading to a congruence and resulting meaningfulness (Chen, 2001; Dik & Duffy, 2009), the implicit foundation for purpose, vocation, and calling.

***Developmental theories.*** A second theoretical perspective in VCD is the developmental framework. One of the most commonly cited developmental theories is Super's (1980) life-span, life-space theory. The theory essentially holds that individuals develop through different stages of vocational processes, and this development occurs in a context that influences the choices made. Others have commented and expanded on Super's (1980) theory (e.g., Gottfredson 1981; Vondracek & Kawasaki, 1995), but the general conclusion of the perspective remains that, as individuals develop through life, they experience different environments, norms, and expectations that influence the vocational choices people make (Super, 1990). Furthermore,

through this development, they create and refine a self-concept that evolves over time through both attention and reflection (Hartung, 2013). As such, success for the individual then becomes a matter of the meaningfulness one experiences in association with this self-concept. In other words, people develop through stages in life, each of which present a context that influences vocational choices made and the self-concept that emerges as either fulfilling or lacking.

From this perspective, VCD is valuable to the degree that it facilitates self-reflection in one's context and stage of life. Specifically, VCD activities that encourage self-reflection help individuals to more clearly see the self-concept at the heart of this theoretical perspective. As a result, individuals are more likely to develop a satisfactory self-concept can serves as the conduit to a sense of meaningfulness upon which purpose, vocation, and calling can emerge.

*Social cognitive theories.* A third theoretical foundation in VCD is the social-cognitive perspective. The theory most commonly associated with this perspective is social cognitive career theory from Lent, Brown, and Hackett (1994). These authors propose a model of career decision-making that is grounded in the framework of social cognitive theory (e.g., Bandura, 2001). Specifically, they suggest that self-efficacy and outcome expectations influence one's interests, which in turn drive one's choices and subsequent satisfaction and performance in a job. In other words, career interests develop into career choices and experiences as a result of one's self-efficacy and expectations associated with the career (Lent, 2013). Lent et al. (1994) did not explicitly use the terms purpose, vocation, or calling, but rather use the language of "vocational interests," claiming that one's vocational interests (e.g., likes and dislikes) are a product of his or her self-efficacy and outcome expectations associated with that interest.

There is much more to purpose, vocation, and calling than simply what one experiences as interests (i.e., likes or dislikes). Nonetheless, to the extent that one's interests are meaningful

and associated with his or her purpose, vocation, and calling, this theory can be a suitable framework for understanding how VCD contributes to these outcomes. Specifically, VCD can be helpful for building both self-efficacy and clear outcome expectations through skill-building activities, modeling, and providing occupational information to emerging adult. According to social cognitive career theory, if these activities increase one's self-efficacy and outcome expectations for a given role, they will also drive one's interests and potentially purpose, vocation, and calling.

*Constructivist theories.* The final theoretical foundation Dik et al. (2009) described in the context of VCD is the constructivist perspective. Relying on work from Cochran (1991, 1997), they describe this perspective as the view that individuals partake in a subjective, dynamic process of constructing meaning from their work (Dik et al., 2009). In particular, as people progress through work experiences, they begin to construct a narrative based on these experiences that influences how subsequent vocational choices are made. Savickas (2013) juxtaposed this theory to VCD perspectives that define careers as objective, prescribed paths. For instance, Super's (1957, 1980) work on careers as developmental stages is an example of a perspective that views careers through objectively prescribed stages. For the constructivist perspective, however, careers are driven and owned by the individuals who hold them, not the contexts or life stages in which they exist; they are subjective, personal experiences that drive the understanding and narrative people use to make future career decisions. In this way, the constructivist perspective holds that individuals are not simply actors (i.e., they fill a role for the organization); they are also agents who personally experience work and authors who construct a meaningful narrative of work in their lives (McAdams & Olson, 2010; Savickas, 2013).



According to Dik et al. (2009), this theoretical foundation offers perhaps the most promise for the study of vocational outcomes like purpose, vocation, and calling. Specifically, if careers are personal, subjective experiences that individuals construct into meaningful narratives, then VCD activities that encourage one to reflect on these experiences are relevant for cultivating meaning. Consider, as an example, students who change their intended college major several times over the course of their education. One way to navigate this confusion and indecision is to reflect on what drove those decisions. Self-reflection of what the individual constructs as meaningful may help to reveal the paths that are more attractive than others for that person.

*A summary of VCD theories.* In summary, there are a number of theoretical foundations for conceptualizing why VCD would foster purpose, vocation, and calling. This comprises the “why” of VCD; what has not been discussed yet is the “how” of VCD. The matter of which characteristics are most effective for VCD interventions is important for higher education institutions hoping to provide the optimal level of career counseling for undergraduate students. Given the variability between the four aforementioned VCD theories (Dik et al., 2009) and the many unique perspectives within each (see Betz, 2008), it should come as no surprise that there are a wide variety of interventions that can be used in career counseling. Moreover, these interventions can include numerous different activities such as networking, resume building, internships, or individual reflection. (Jome & Philips, 2013). As such, I will not discuss the particular activities of VCD interventions here; instead, the specific activities to be used in this proposed study are listed in [Table 3](#) and have been created based on a review of best practices in the VCD literature. These best practices are described in the subsequent section along with the many factors upon which VCD interventions depend for success.

**Best practices for VCD interventions.** The evidence that VCD interventions can be effective for building career maturity and career decidedness (Brown & Ryan Krane, 2000; Oliver & Spokane, 1988; Spokane & Oliver, 1983; Whiston, Sexton, & Lasoff, 1998) makes these interventions worth the investment for higher education institutions. Yet, these institutions would benefit from a more specific description of the best practices within this investment. The aforementioned research provides several suggestions for specific, underlying ingredients that contribute to the success of the VCD practices. In particular, a frequently-cited meta-analysis from Brown and Ryan Krane (2000) suggested five critical ingredients for ensuring the effectiveness of VCD interventions. Unfortunately, no studies from Brown and Ryan Krane's (2000) meta-analysis utilized all five of the ingredients; logistically, it is difficult to incorporate all five of these qualities, and this study also fails to exhaustively integrate each. Nevertheless, the evidence suggests that the incorporation of a combination of these five ingredients increases the effectiveness of VCD interventions. As such, they are discussed throughout this section.

**Key VCD ingredient #1: Written exercises.** The first key ingredients for effective VCD interventions is the use of written exercises. This includes guiding participants in the process of writing down their thoughts, opinions, perceptions, feelings, etc. about certain careers. More specifically, Brown et al. (2003) suggested that these written exercises are more effective when they prompt two specific topics: (a) writing about comparisons between jobs, and (b) writing about goals and plans for one's future career. According to Whiston and James (2013), these writing exercises are especially effective because they entail a cognitive reflection process that fosters deeper understanding and longer-term retention of the information. For example, if a student is discerning whether or not to apply to law school, reflecting and writing down her goals can serve to foster a deeper understanding of her self-concept (e.g., her strengths, skills,

interests), thereby allowing her to more fully discern if law school fits well with that self-concept. In addition, writing about how law school would compare to other career paths may help solidify her knowledge of these career paths and allow for better decision-making. In the present study, a number of various activities invite this form of in-depth reflection and writing from students in their career discernment.

***Key VCD ingredient #2: Individualized feedback.*** A second key ingredient for VCD interventions suggested by Brown and Ryan Krane (2000) is the use of feedback. Whiston and Rahardja (2008) describe how this can come in the form of individualized attention or in providing guidance in group settings. Of particular importance for this ingredient is the clarification of conflicting or confusing assessment data. Brown et al. (2003) suggested that feedback is particularly important when interpreting assessment data that is not easily understandable. For instance, a student might be confused when his IPIP-NEO assessment indicates a high score for agreeableness, but his VIA assessment suggests that kindness and fairness are not high on his list of strengths. In this example, a career counselor can provide feedback to help the student understand these results and foster a clearer self-concept.

Furthermore, providing additional feedback related to career decision-making skills will likely also cultivate self-efficacy for students (Bandura, 1977), which may be another source contributing to vocational career outcomes (Lent et al., 1994). In the present study, feedback was embedded in two manners. First, each activity of the program invited questions from students and an opportunity for a graduate career advisor to provide direct feedback to the content on which the student reflected. Second, there was also continuously available feedback as a resource for students in need of guidance. Specifically, all students in the program had access to career

guidance counselors at the university hosting this program, each of which were trained in the use of individualized feedback for guiding students making career decisions.

**Key VCD ingredient #3: Providing occupational information.** A third key ingredient for VCD interventions suggested by Brown and Ryan Krane (2000) is providing students with occupational information about careers. This ingredient is essential given the changing labor landscape in the 21<sup>st</sup> century. In particular, emerging adults need to be informed about the implications of their career decisions given recent increases in job automation and contract labor (DeBell, 2006). For example, a student attempting to decide between a career in business management versus engineering would likely benefit from knowledge about the salaries, typical tasks, and recent workforce changes associated with each.

Whiston and Rahardja (2008) noted that many participants can and do take this task outside of career counseling interventions, but it is essential that counselors provide structure and direction within the sessions of a counseling intervention. For instance, it may not be essential for the VCD intervention to provide specific details of jobs, but it must provide resources to help students obtain this information on their own. In the present study, the VCD intervention included both guidance and encouragement for students seeking career information; examples of this included activities such as job shadowing and scheduling informational interviews. Both of these activities serve to foster a knowledge of career information for the student, which can help them to make career decisions as they develop.

**Key VCD ingredient #4: Modeling.** A fourth critical ingredient in career counseling interventions is the practice of modeling successful career decision-making for students (Brown & Ryan-Krane, 2000). For example, career counselors can model career decision-making by offering stories of their own career development experiences; providing authentic accounts of

using assessment data to make career choices; bringing in guest speakers who have navigated multiple careers; assigning participants to mentors with substantial career experience; and using video or technological presentations as a supplement to in-person modeling (Whiston & James, 2013). These practices are recommended for students discerning a career path because they contribute to the cultivation of career decision self-efficacy based largely on Bandura's (1977) work suggesting that modeling is one of the four sources for building self-efficacy.

For example, consider a student lacking confidence in his ability to find information about a potential job in recruiting. If his career counselor provides testimonies, stories, and models for obtaining that information, he then has a better understanding of the steps he can take as well, building his self-efficacy for that career decision-making skill. In the present study, modeling was not directly occurring in each activity, but rather occurred indirectly through a number of activities. For instance, meeting with an advisor, holding informational interviews, and even just reading through instructions and guidance documents provides a preliminary source of modeling that might serve to help build self-efficacy for students.

***Key VCD ingredient #5: Support-building.*** Finally, Brown and Ryan Krane (2000) also proposed that building support is a critical ingredient in career counseling interventions. Providing support to students is critical because career decisions do not happen in a vacuum; rather, contextual forces such as familial roles or educational obligations can help or hinder an individual in making career decisions. For example, consider a student who has found herself in difficult financial times and is making career decisions while simultaneously struggling to pay her rent, cost of living expenses, and the scandalously high tuition prices universities charge. The experience of discerning a career path is likely different for this individual compared to the typical experience of undergraduate students because she faces numerous external stressors that

limit her time, energy, and resources for sufficient discernment. These limitations act as barriers to adequately cultivating self-concept, self-efficacy, and tangible knowledge of occupations. As such, counselors must build adequate support in the decision-making process, which can include providing guidance and suggestions, but should also help participants to build their own sustainable support systems. In this study, students had opportunities to build support systems through various activities that encourage building community with others.

***Additional key VCD ingredients.*** The five aforementioned ingredients are commonly referenced factors for successful VCD interventions, but there are additional factors that influence the effectiveness of these interventions. For instance, some research and literature suggest that a *working alliance* between the participant and his or her counselor is also critical ingredient (Masdonati, Massoudi, & Rossier, 2009; Meara and Patton, 1994). This entails a process of agreeing on the goals of the intervention and the required steps to attaining them, and enhancing the quality of the relationship between the counselor and participant (Whiston & Rahardja, 2008). Another factor is the dose effect or *treatment intensity*. Several meta-analyses suggest that treatment intensity has a positive relationship with the effect size of the intervention for career maturity and decidedness outcomes (Brown & Ryan Krane 2000; Spokane & Oliver, 1983). This could reflect the number of sessions attended, the number of hours spent participating in the intervention, or the number of various activities one experiences.

Finally, the *modality* of a career development intervention is likely to also influence its effectiveness. Whiston and James (2013) suggested that the evidence is complex in determining whether group or individual career counseling is more effective. Yet, one modality in particular is especially salient as the least effective: the use of counselor-free interventions such as a completely online or on-paper VCD intervention with no guidance counselor support. Of

particular relevance to this study's use of a largely online VCD program, Whiston et al. (1998) found that that technology-based interventions are only effective if they incorporate in-person counseling alongside the technology platform used. Although this meta-analysis comes from a time when technology was vastly different than it is now, it does provide some support for the notion that the presence of a counselor for individualized support is important for VCD clients. In this study, the VCD intervention was primarily administered online; yet, the program entailed a substantial amount of online interaction with a graduate career advisor, and students were frequently encouraged to meet with a career counselor on-campus as they progressed.

*A summary of best practices for VCD ingredients.* These ingredients alongside the aforementioned theoretical perspectives create a compelling picture for both how and why VCD interventions should be effective for cultivating vocational outcomes such as a sense of purpose, vocation, or calling. In [Table 3](#), the specific activities of the present study are listed with a brief description of what the activity entailed.

Together, these activities each incorporate some degree of the best practices for VCD interventions. One final topic not yet discussed, however, is the mediating mechanisms that connect VCD interventions to these outcomes. Based on the theoretical perspectives of VCD, the intervention best practices, and the various activities in this program, at least three mediators can be identified as key mechanisms in VCD, as discussed in the following section.

**Theoretical mediators of VCD counseling.** Career counseling can help one experience a sense of purpose, vocation, and calling through a number of mediators. Three of these mediators examined in this study are career decision self-efficacy, self-concept clarity, and knowledge of occupational information.

*Career decision self-efficacy.* Career decision self-efficacy is a content-specific take on Bandura's (1977) conception of self-efficacy. In terms of career decision-making, the term represents the belief that one has the capacity or ability to successfully make decisions about his or her career (Betz, Hammond, & Multon, 2005). A number of the activities in [Table 3](#) are likely to increase one's career decision self-efficacy because they provide opportunities to learn and develop the skills needed to be confident in one's ability. This confidence, or self-efficacy, allows the individual to better discern a career path, making it a key mechanism through which VCD activities lead to meaningful career decisions. This process is predominantly highlighted in the work of social cognitive career theory, which suggests that career interests emerge from self-efficacy and outcome expectations (Lent et al., 1994). Outcome expectations are described in detail later as they relate to knowledge of occupational information, but self-efficacy is a critical ingredient for meaningful career decisions from this theoretical perspective. Accordingly, to the extent that VCD can build self-efficacy for making career decisions, this becomes a salient mechanism between VCD interventions and outcomes such as purpose, vocation, and calling.

*Self-concept clarity.* The notion of self-concept clarity represents the clarity, consistency, and stability of one's understanding of his or her own personal qualities (Campbell, Trapnell, Heine, Katz, Lavalley, & Lehman, 1996). This clarity often results from the self-reflection that several of the VCD activities listed in [Table 3](#) encourage. To elaborate, by engaging in self-reflection of one's experiences, interests, cognitions, and emotions, students build a much deeper and clearer understanding of who they are, what they prefer, and what they find meaningful. This enables career decisions that are more likely to result in this meaningfulness for two reasons. First, it allows students to better assess the degree to which their self-concept fits well with various work environments (i.e., the trait-factor perspective). Second, it provides students with



information about themselves that allows for a meaningful self-narrative to be constructed and used in discerning future career decisions (i.e., the constructivist perspective).

***Knowledge of occupational information.*** One final mediator between VCD and its outcomes is an individual's knowledge of occupational information. This mediator represents a clear understanding of what various roles or jobs will entail. This is an important mechanism of VCD insofar as it provides students with knowledge of what one can expect in various forms of work. Lent et al. (1994) referred to this as an outcome expectation, and its relevance lies largely in its role in cultivating both self-efficacy and congruence with the work environment. Specifically, knowledge of occupational information allows individuals to assess whether or not that occupation will be a good fit with their personality; it also allows the individual to make a better judgment of whether or not he or she would be successful in the role. In both cases, this knowledge of occupational information allows one to better discern various career paths, thereby increasing the chances that the career path chosen will be meaningful to that individual.

**Hypothesized effects of VCD.** Overall, the aforementioned theoretical foundations and key ingredients of VCD interventions suggest that VCD activities should lead to a stronger presence of purpose, vocation, and calling through self-concept clarity, career decision self-efficacy, and knowledge of occupational information, as described in Hypotheses 1 – 4 below.

*Hypothesis 1:* Participation in vocational career development activities will lead to higher levels of (a) presence of purpose, (b) vocational identity, and (c) presence of calling for emerging adults in the higher education context than a control group of no participation in vocational career development activities.

*Hypothesis 2:* Self-concept clarity will mediate the effect of vocational career development activities on (a) presence of purpose, (b) vocational identity, and (c) presence of calling for emerging adults in the higher education context.

*Hypothesis 3:* Career decision self-efficacy will mediate the effect of vocational career development activities on (a) presence of purpose, (b) vocational identity, and (c) presence of calling for emerging adults in the higher education context.

*Hypothesis 4:* Knowledge of occupational information will mediate the effect of vocational career development activities on (a) presence of purpose, (b) vocational identity, and (c) presence of calling for emerging adults in the higher education context.

The aforementioned evidence provides a comprehensive picture of why and how VCD interventions work. Specifically, the numerous critical ingredients and theoretical foundations suggest that VCD interventions build self-efficacy, self-concept clarity, and knowledge of occupational information, all of which may play a role in cultivating a sense of meaning associated with work; yet, a question remains as to whether or not this experience of meaning is strong enough to translate into the more existential outcomes of purpose, vocation, and calling. In other words, what additional VCD strategies can further ensure that purpose, vocation, and calling flow from this sense of meaning? Some recent work has suggested that infusing a language of calling and vocation into career counseling can be effective for fostering a sense of meaning and career decision self-efficacy (Dik & Steger, 2008). Although this infusing of a

language of calling (i.e., a language that is open to the transcendent) is an appropriate first step, I would suggest going even further by incorporating spiritual discernment activities into VCD interventions. As such, in the following pages and final section of this review, I will discuss the potential role of spirituality in career counseling and the value it could bring to emerging adults.

### **Spirituality in Career Development**

“Discernment is the art of appreciating the gifts that God has given us and discovering how we might best respond to that love in daily life. It is a process of finding one’s own way of discipleship in a particular set of circumstances; a means of responding... in a situation where there are often conflicting interests and values and choices have to be made.” (Lonsdale, 2005, p. 89-90).

Though Christian spirituality is not the only tradition that espouses discernment, Lonsdale’s (2005) description here makes it particularly appropriate for both this study and VCD as a whole. Specifically, spirituality as the discernment of how to make concrete what one finds true or meaningful can be an incredibly powerful tool for emerging adults seeking to do just that with a career choice. For example, emerging adults are often exploring different career paths such as graduate school or a specific vocation; in this exploration, activities that facilitate deeper thinking and discernment of what is meaningful are further resources for making these career decisions. As such, in the following section, I will present a deeper examination of concepts related to spirituality and its components.

**Spirituality and its many forms.** Spirituality has generally been accepted as having predominantly positive effects on well-being and health (Koenig, McCullough, & Larson, 2001; McCullough, Larson, & Worthington, 1998; Pargament, 2013). Because of its nature of being a personal search for the transcendent, it is also logically appropriate for VCD interventions.

Additionally, over the past 15 years, the notion of spirituality has become increasingly valued in organizations (e.g., Duerr, 2004; Mitroff & Denton, 1998; Weinberg & Locander, 2014), largely due to the growing list of attractive outcomes associated with it—organizational commitment, job satisfaction, job involvement, intuition, creativity, honesty, trust, performance, motivation, employee flexibility, and lower levels of stress (Krishnakumar & Neck, 2002; Lopez, Ramos, & Ramos, 2014; Milliman, Czaplewski, & Ferguson, 2003). As such, spirituality holds much potential as an additional ingredient in VCD for emerging adults.

Still, a question remains as to which spiritual tradition is best suited for emerging adulthood VCD. Identifying a suitable overarching spiritual tradition is important for at least two reasons. First, it allows for a clearer and richer understanding of the values and beliefs upon which the VCD intervention is grounded. Second, it allows the findings from this evaluation to begin to inform which spiritual traditions can offer value for career counseling. In the present study, the VCD program exists in a private, Christian university, making a Christian spiritual tradition somewhat more appropriate than other traditions. Although the VCD intervention is not a perfect representation of any one spiritual tradition, the spirituality of St. Ignatius in particular is aptly fit for this study. As described in the following sections, the tenets of Ignatian spirituality have considerable overlap with the activities of this VCD intervention and are especially appropriate for the needs and experiences of emerging adults. As such, it is adopted as the primary theoretical foundation and perspective for this spirituality-infused VCD intervention.

**The Jesuits and Ignatian spirituality.** Ignatian spirituality is a spiritual tradition associated with St. Ignatius of Loyola, the founder of a religious order of priests within the Roman Catholic Church known as the Jesuits. This means that, while existing under the umbrella of Roman Catholicism (which exists under the larger umbrella of the Christian faith), they

subscribe to a unique set of values, emphases, and practices that one might not find as saliently in other Christian contexts (or even in other contexts within Roman Catholicism; see O'Malley [2016]). Of the many unique ideas and themes that characterize this order, they are often associated with their involvement in education, spiritual retreats, and the espousal of humanistic concepts such as an appreciation of arts/theatre/dance, imploring equal human rights and treatment, exploring the human experience, and urging interreligious and intercultural dialogue and respect (Modras, 2004). More than each of these qualities, however, the Jesuit order is well-known for one of the most widely-used set spiritual practices in existence: the spiritual exercises of St. Ignatius of Loyola.

St. Ignatius of Loyola was born Iñigo de Loyola into the nobility in Spain prior to forming the Jesuit order. His youth was characterized by violence and lust, involving numerous altercations with legal authorities and several short and frivolous relationships with women. At the same time, Iñigo also had a tremendous amount of pride and desire for righteousness (O'Malley, 1993, 2014). Eventually, he entered the Spanish military in pursuit of glory, where he was wounded in battle in 1521. The injury secluded Ignatius to a castle in Loyola where he would be forced to rest and not take part in any strenuous movement. In this castle, he discovered that the only texts at his disposal were a book on the lives of the saints and a book on the life of Christ. This is how St. Ignatius's conversion took shape. Holed up in a castle in Loyola, the young warrior came to experience peace and consolation with the thought of completely transforming his life in response to a greater calling. Using the lives of the saints as models, and through engaging in self-reflection and prayer, Ignatius would come to lay down his weapons, give away all that he owned, and form an order in the Catholic Church in 1540 that would be labeled the Society of Jesus (SJ), or more commonly, the Jesuits.

Since then, the Society of Jesus has had a rich and turbulent history. In its infancy, Jesuit priests primarily served in one of two ways—either in missionary efforts or through education. With regard to the former, two of St. Ignatius’s early companions, St. Peter Faber and St. Francis Xavier both dedicated their lives as missionaries in Europe and Asia, spreading a message of love and service through modes of peace and intercultural dialogue. With regard to education, the Society grew to create hundreds of elementary schools, secondary schools, colleges, and universities throughout the world, many of which still exist today, welcoming all faiths and walks of life to their hallways. This growth was not without its challenges; at times, the Jesuit community’s commitment to justice for the marginalized and socially outcasted created geopolitical and theological controversies for leaders within the Catholic Church (O’Malley, 2014), leading to an official suppression of the order (i.e., disbanded in name, though not necessarily in practice) by the Vatican from 1773 until 1816. Nonetheless, apart from this brief suppression, the Society of Jesus would become one of the most well-known and established religious orders in the Catholic Church, continuing its missions in education and service.

In addition to these missions, one additional contribution of the Jesuits widely used in religious and even nonreligious settings today is the set of spiritual exercises of St. Ignatius. These exercises are commonly practiced over the course of a 40-week timespan, or even through a 1-month intensive retreat (Watson, 2008). Yet, without the structure of the 40-week or 1-month retreat, there are a handful of general principles and shorter activities found within Ignatian spirituality that seem notably appropriate for a VCD intervention for emerging adults. Specifically, Fr. James Martin (2012) suggested that Ignatius’s spirituality and tradition can be characterized by several unique qualities. These qualities are discussed below, with emphasis given to their relevance in the use of VCD interventions with emerging adults.

***Detachment.*** Ignatius was a firm believer in the value of detachment, or a willingness to embrace freedom from typical obligations or social pressures, thereby allowing for a deeper connection with the transcendent. For Jesuit priests, this value is the logical foundation for making vows of poverty, chastity, and obedience—each serve to prevent the priest from becoming too absorbed in additional obligations that might distract from a mission of service to others. For emerging adults, this value is quite suitable as many are experiencing for the first time in their lives a true detachment from traditional familial obligations and roles upon entering higher education. To elaborate, Ignatian spirituality is well-suited for emerging adulthood VCD because it encourages emerging adults to embrace their newfound freedom as a way to practice deeper discernment of one's path in life. Moreover, St. Ignatius's emphasis on detaching from distractions might also be particularly valuable to a generation of emerging adults that are growing more and more attached to technological interfaces and social media networking. Overall, this guiding value allows for more fruitful reflection and discernment of one's self and environment, two key components of VCD theoretical perspectives.

***God as incarnate.*** The second quality of Ignatian spirituality described by Fr. Martin (2012) is the view of God as incarnational. For Ignatius, this specifically was the theological view that God is not simply a transcendent observer of the world, but rather that God became human. One reason why this sentiment is particularly valuable for VCD interventions is that it complements the role that counselor's play in building support for participants. Specifically, perceived support is a critical ingredient in VCD interventions because the external stressors that participants experience require support and guidance (Brown & Ryan-Krane, 2000). This need for support makes a conceptualization of God as involved and incarnate particularly valuable because an incarnate God is one that can be viewed as supportive and relatable to the human

experience. To elaborate, if one believes that God became human through Jesus or is incarnate through creation, as Ignatian spirituality espouses, then this allows one to more easily think of God as a relatable entity—that is, as an entity that understands the human experience, has felt the pains and joys of life, and knows the anxiety of trying to make vocational decisions.

This feeling that God or a transcendent being may be incarnate enough to be compassionate to the human experience could provide an additional source of perceived support for emerging adults (Cassell, 2002). It is also possible that this perceived support can serve as an enabling condition for self-efficacy to emerge. To elaborate, Bandura (1977) discusses four sources of self-efficacy, one of which is verbal persuasion such as offering support. From that line of reasoning, viewing God as a supporting being who is compassionate to the human experience could contribute to a student's self-efficacy, a key component in the process of fostering vocational outcomes.

*Contemplative in action.* The third characteristic of Ignatian spirituality discussed by Fr. Martin (2012) is the sentiment that spirituality does not need to be compartmentalized from everyday life. Rather, spiritual well-being requires one to be contemplative in action. This value can be identified throughout Jesuit culture and practices. Their priests do not follow the traditional monastic practice of removing themselves from society to become closer to God; rather, they practice contemplating God's presence while existing within society. This is why it is not uncommon for Jesuit priests to also hold jobs in hospitals, academia, as engineers, as business leaders, etc. In other words, Ignatian spirituality entails the view that a deep, spiritual relationship with God can and should be pursued amidst the busyness of everyday life.

This view fits well with VCD theories, specifically the constructivist view that career development is not an objectively prescribed process but rather a process of finding and making



meaning from experiences. This process requires contemplation of one's experiences, and emerging adults may benefit from engaging in this contemplation in the midst of their daily lives. Perhaps the most well-known Ignatian spiritual practices that encourages contemplation in action is the *Examen* prayer, a brief prayer that facilitates a process of becoming aware of one's experiences, emotions, cognitions, and passions (Lowney, 2003, 2009). This prayer, and other forms of contemplation in action, help students to better understand themselves. Specifically, they give the student space and an invitation to think deeply about their experiences and how those experiences make them feel. In doing so, they go through a self-reflection that clarifies their self-concept, a key to making meaningful career decisions.

***God in all things.*** Contemplating one's experiences in the midst of the busyness of life may contribute specifically to the outcome of calling if the individual also embraces the fourth value of Ignatian spirituality described by Fr. Martin (2012): seeing God in all things. This value is similar to the value of an incarnational God but extends beyond believing that God once became human to also include the belief that He is fully present in all aspects of life. Ignatian spirituality encourages individuals to discern the presence of God or a transcendent being in all things, even when those things are not explicitly religious or theological (e.g., art, sports, music, science). This can facilitate one's search for and discovery of calling because, by definition, a calling originates from an external source. For this reason, exploring how the transcendent is present even in the secular aspects of life may help an emerging adult to more readily interact with this external and transcendent presence, thereby contributing to his or her capacity to discern how that transcendent presence is calling the individual.

Outside of this perceived interaction with the transcendent, embracing God as present in all things can further contribute to vocational outcomes in the same way that viewing God as

incarnational can. Specifically, if students believe that God is fully present in their lives and frequently interacting with them through their experiences, they can more easily view that transcendent being as a support in their discernment—a support which can be helpful for cultivating self-efficacy and relieving anxiety that might interfere with career decisions.

***Practicality.*** One fifth and final quality that Jesuit priests are well known for, though not distinctly identified by Fr. Martin (2012) as a defining quality of Ignatian spirituality, is the role of practicality. Specifically, although Jesuit priests encourage participation in the various practices of Ignatian spirituality, they also embrace the need to be practical and participate in traditional forms of discernment and decision-making. In other words, Ignatian spirituality is not a spiritual tradition to be practiced as an exclusive solution to decision-making; rather it complements and enhances traditional processes of decision-making. This is particularly important for this study as the evaluation described in greater detail in the method section is not a comparison of Ignatian spirituality to traditional VCD. Instead, it is a comparison of traditional VCD to those same practices with spirituality infused into the approach. In other words, this study examines the incremental effects of infusing spirituality into an approach that is already well-suited for cultivating vocational outcomes.

**The role of Ignatian spirituality in fostering vocational outcomes.** Understanding the history and definition of Ignatian spirituality is important for understanding the role of Ignatian spirituality in potentially fostering vocational outcomes. Specifically, in the current study, I examined if the tenets and practices of Ignatian spirituality will add to the effect of VCD interventions on the mediators that lead to purposes, vocation, and calling. For example, the mediator of self-concept clarity can be cultivated through Ignatian spirituality practices that incorporate reflection. This might include the *Examen* prayer which invites reflection on one's

experiences, emotions, and thoughts; or, it might include discerning how one can use his or her gifts to serve others in community. Regarding career decision self-efficacy, Ignatian spirituality's conceptualization of God as fully present and incarnate in all things allows students to view God as one who is active in their lives, supporting them and helping them to see how they have the ability to make their desires and passions a reality. The final mediator, knowledge of occupational information, is also cultivated through Ignatian spirituality, but less directly than the previous two. Specifically, the emphasis in Ignatian spirituality on the need for practical discernment and preparation alongside prayer and spiritual discernment acts as an additional encouragement for building practical knowledge of various occupations.

In addition to influencing vocational outcomes through these mediators, Ignatian spirituality practices may also have a direct effect as well. For example, the Ignatian spirituality principles of detachment and contemplation in action encourage self-reflection that helps students to better understand what is meaningful to them, which helps to inform the purpose or general goals one might have for experiencing that meaning. Similarly, Ignatian spirituality also encourages a reflection of how the specific activities and roles one has in life make the individual feel. This more specific reflection is key to the *Examen* prayer, for example, and can be a valuable process for discerning how one's general purpose becomes refined into a more specific vocation (i.e., a specific approach or role for one's purpose). Finally, the principles of viewing God as both incarnate and present in all things can help students to experience a calling because they both encourage a belief that God is interacting with and calling us through our experiences and communities.

Students may not feel that God would take the time to call or communicate with them on a personal level—how many students can say they have listened to a burning bush? Yet, with the

tenets of Ignatian spirituality, not only are students encouraged to believe that they are being called in their everyday experiences, but also that they are invited to a deeper reflection of themselves and how to respond to that call in a personally meaningful way. In sum, infusing Ignatian spirituality practices into traditional VCD should add to the effect of traditional VCD practices on the mediators and outcomes described in Hypotheses 1 – 4. Specifically, in this study, I hypothesize the following effects of this spirituality-infused VCD.

*Hypothesis 5:* Participation in spirituality-infused vocational career development activities will lead to unique variance explained in (a) presence of purpose, (b) vocational identity, and (c) presence of calling for emerging adults in the higher education context when compared to both a control group of no participation in vocational career development activities and a group participating only in traditional career development activities.

*Hypothesis 6:* Self-concept clarity will mediate the effect of spirituality-infused vocational career development activities on (a) presence of purpose, (b) vocational identity, and (c) presence of calling for emerging adults in the higher education context.

*Hypothesis 7:* Career decision self-efficacy will mediate the effect of spirituality-infused vocational career development activities on (a) presence of purpose, (b) vocational identity, and (c) presence of calling for emerging adults in the higher education context.

*Hypothesis 8:* Knowledge of occupational information will mediate the effect of spirituality-infused vocational career development activities on (a) presence of purpose, (b) vocational identity, and (c) presence of calling for emerging adults in the higher education context.

### **A Hypothesized Model for Ignatian-Based VCD**

In summary, emerging adulthood is a unique stage of development characterized by identity exploration, frequent change, optimism about the future, freedom without self-sufficiency, a focus on self-development, openness to spirituality, and a concern for intrinsic work values (Arnett, 2006; Astin et al., 2011; Jin & Rounds, 2012; Koenig, 2015; Williamson & Sandage, 2009). These unique qualities suggest that emerging adults are either pursuing understanding or could benefit from encouragement and guidance in pursuit of understanding. For that reason, a systematic approach to evaluating VCD interventions that facilitate this understanding is tremendously valuable for emerging adults.

Yet, a question remains as to how VCD can be even more effective for cultivating outcomes such as purpose, vocation, and calling. Traditional VCD activities can be great resources for vocational outcomes, but what can higher education institutions add to the process to further ensure these outcomes are reached? One approach offered and evaluated here is the infusing of spirituality into traditional VCD activities. Spiritual discernment activities provide students with the space and invitation to discern more deeply and with the presence of God or a transcendent being. This additional ingredient should add to the effectiveness of VCD interventions for a number of reasons—its appropriateness for the needs of emerging adults, its alignment with VCD practices and theories, and its invitation to reflect on oneself and the role of the transcendent in understanding the self. From this line of reasoning, in the subsequent chapter, I provide a description of the method I used to evaluate the effectiveness of this added ingredient in traditional VCD.

## CHAPTER II

### Method

This study employed a randomized experimental design to test the effectiveness of three VCD intervention conditions on a battery of outcome variables measured at two time points. These two time points were separated by approximately three months. In the following sections, I will expand on this design by discussing the participants of the study, the sampling procedures utilized, and the manipulations and measures employed.

### Participants

Participants for this study were higher education students in their second year (based on academic standing) at a private, Christian university in the Pacific Northwest. The university embraces a Wesleyan Methodist Christian tradition and requires its undergraduate students to register for three Christian theology courses to graduate, and these courses served as the venue through which the VCD intervention was administered in this study. Specifically, students who enrolled in these Christian theology courses were given access to the activities of the VCD intervention. A majority (61.3%) of the sample were 19 years old ( $M = 19.48$ ,  $SD = 1.36$ ), and the students were more represented by those who are not international students (96.8%), those who do not consider themselves to be a member of the LGBTQIA+ community (94.4%), and those who identified as female (80.6%). In terms of race, a majority (64.5%) of the sample identified as white, with 15.3% identifying as Asian; 10.5% identifying as Hispanic or Latino; 4.8% identifying as Black or African American; 1.6% identifying as Native Hawaiian or Pacific Islander; and 3.2% preferring to self-describe. Finally, with regard to employment status, many of the students (72.0%) were working part-time, with 24.0% of the students not currently

working. The remaining 4.0% of students either worked full-time or were working in an unpaid role (e.g., unpaid internship).

### **Sampling**

Data was obtained through Canvas, an online learning platform designed for higher education courses. Students enrolled in a theology course as a part of their education requirements and were given access to a Canvas platform where the VCD intervention was administered via posting and inviting students to use the provided VCD resources. In addition to the VCD resources, the Canvas platform also invited students to complete an online survey through the Qualtrics platform, which served as the primary data source for this study.

**Random assignment.** Students who were enrolled in the aforementioned theology courses were randomly assigned individually to various experimental conditions. One condition received very minimal VCD guidance, having only access to an activity encouraging the student to meet with his or her advisor. A second experimental condition received only the VCD resources that fit the description of traditional VCD, as described in the VCD condition section below. A third group received both the traditional VCD resources alongside spirituality-infused VCD resources.

### **Sample Size and Power**

Given the three experimental groups and three mediators in the analysis for this design, to analyze group differences with bias-corrected bootstrap mediation analyses assuming a medium effect size on both the *a* and *b* paths, Fritz and MacKinnon (2007) recommend a sample size of at least 71 participants. Assuming that power, or the probability of finding a significant effect that exists in reality, is set at .80 and alpha at .05 (Cohen, 1992), this would equate to at least 24

individuals per condition. As described in the preliminary results section in Chapter III, this sample size requirement was met with the use of multiple imputation.

### **Manipulations and Measures**

To test my hypotheses, I used several vocational, psychological, and spiritual measures, as well as a manipulation of the independent variable to form a 3-group VCD variable. The variables I used as the mediators and outcomes of this design included self-concept clarity, career decision self-efficacy, knowledge of occupational information, presence of purpose, vocational identity, and presence of calling. In addition to the variables pertinent to testing the aforementioned hypotheses, I also included a number of additional variables as either covariates or for exploratory, *post hoc* analyses. These included strength of faith, the amount of time spent using the Canvas platform, and age of the student. Each of these variables as well as the manipulation of the independent variable are discussed here.

**VCD condition.** Students in the theology courses through which the VCD intervention was administered were randomly assigned to three conditions, each of which are described here.

**Control condition.** This condition received no access to the VCD resources posted to the Canvas platform. The only VCD counseling provided to these students was the guidance one might experience from a professor in higher education.

**Traditional VCD condition.** Students who are randomly assigned to this condition received access to traditional VCD resources posted to the Canvas platform. These resources included information on professionalism, informational interviewing, job shadowing, changing majors, navigating uncertainty, using LinkedIn, and meeting with advisors. Specifically, there were eight individual activities/resources on Canvas, each of which provided recommendations, guidance, and invitations for reflection on these various VCD activities.



***Spirituality-infused VCD condition.*** Students who were randomly assigned to this condition received access to both traditional VCD resources and Ignatian spirituality resources posted to the Canvas platform. In addition to the aforementioned traditional VCD resources, these students also received access to five additional resources on Canvas that provided further guidance and resources for daily contemplative prayer, discernment in community, discernment of God’s presence in one’s experiences, discernment for decision-making, and finding rest or a sense of “sabbath.”

**Self-concept clarity.** Self-concept clarity was measured using the 12-item Self-Concept Clarity (SCC) Scale from Campbell et al. (1996). The SCC Scale is said to measure the clarity, consistency, and stability of one’s understanding of his or her own personal qualities (Campbell et al., 1996). Participants were presented with 12 unidimensional statements and were asked to rate the extent to which they agree or disagree with the statement using a scale from 1 (*strongly disagree*) to 5 (*strongly agree*). Sample statements include “I spend a lot of time wondering about what kind of person I really am,” “Sometimes I think I know other people better than I know myself,” and “In general, I have a clear sense of who I am and what I am.” Scores for each item were aggregated by taking the mean of the items to create a composite self-concept clarity score. Past research has demonstrated sufficient internal consistency values for the 12-item SCC Scale ( $\alpha = .89$ ; Campbell et al., 1996; Hanley & Garland, 2017); internal consistency values for these items across the 20 multiple imputation datasets in this study ranged from  $\alpha = .86-.87$  in the pre-test data and  $\alpha = .86-.86$  in the post-test data.

**Career decision self-efficacy.** Career decision self-efficacy was measured using the short-form version of the career decision self-efficacy scale that includes 25 items of Taylor and Bentz’s (1983) original 50-item measure (CDSE-SF; Betz et al., 2005). This concept is defined

as the belief that one has the capacity or ability to successfully make decisions about his or her career (Betz et al., 2005). The 25-items of the CDSE-SF represent five dimensions of career decision self-efficacy that are grounded in past work from Crites (1961, 1965, 1978) who suggested five competencies of making career decisions: (a) self-appraisal, (b) occupational information, (c) goal selection, (d) planning, and (e) problem solving. Self-efficacy related to each of these five dimensions was measured with five task statements per competency. Each item asked the participant to describe their confidence that they could perform a certain career decision-making task. Example items included “Make a plan of your goals for the next five years” (planning) and “accurately assess your abilities” (self-appraisal). Participants responded to each item using a scale from 1 (*no confidence at all*) to 5 (*complete confidence*).

Prior research utilized a 10-point response scale (Betz, Klein, & Taylor, 1996; Taylor & Bentz, 1983), but recent work has suggested that a 5-point response scale produces similarly psychometrically sound data (Betz et al., 2005). Scores for each item were aggregated into their dimensions by taking the mean of the items to create composite dimension scores. Using the CDSE-SF and a 5-point response scale, Betz et al. (2005) found internal consistencies for the five dimensions that ranged from .78 to .95 across three samples; internal consistency values for these items across the 20 multiple imputation datasets in this study ranged from  $\alpha = .95-.95$  in the pre-test data and  $\alpha = .94-.95$  in the post-test data.

**Knowledge of occupational information.** Knowledge of occupation was measured using four items from the 20-item My Vocational Situation assessment (MVS; Holland, Daiger, & Power, 1980). The four items represent the individual’s subjective perception of how much occupational information he or she has. Each item stemmed from an opening line that stated, “I need the following information.” Example items included “how to find a job in my chosen

career” and “what kinds of people enter different occupations.” Participants responded to each item using a scale from 1 (*not true*) to 5 (*true*). The four items were aggregated by taking the sum of scores for items. Using a sample of higher education students and workers, Holland et al. (1980) found KR-20 estimates of .79 for males and .77 for females; internal consistency values for these items across the 20 multiple imputation datasets in this study ranged from  $\alpha = .90-.91$  in the pre-test data and  $\alpha = .87-.90$  in the post-test data.

**Sense of purpose.** Sense of purpose will be measured using a 7-item version of the Purpose Subscale of the Psychological Well-Being (PWB-P) assessment from Ryff (1989). Sense of purpose in the PWB assessment is one of six dimensions, each measured with 20 items that asked participants to rate their agreement with statements using a 6-point Likert scale from 1 (*strongly disagree*) to 6 (*strongly agree*). An example statement was “I am an active person carrying out the plans I set for myself.” Scores for this dimension of psychological well-being were aggregated by taking the mean of the items to create a composite score for sense of purpose. The 20-item PWB-P demonstrated an internal consistency estimate of  $\alpha = .90$  and a test-retest reliability estimate over a 6-week interval of  $r = .82$  (Ryff, 1989). Subsequent research has demonstrated that 14-item (Ryff, Lee, Essex, & Schmutte, 1994) and 7-item (Abbott et al., 2006; Abbott, Ploubidis, Huppert, Kuh, & Croudace, 2010) versions of the tool can also be used with sound psychometric properties. As such, sense of purpose in this study was measured using the 7-item version of the PWB-B from Abbott et al. (2006, 2010); internal consistency values for these items across the 20 multiple imputation datasets in this study ranged from  $\alpha = .78-.79$  in the pre-test data and  $\alpha = .73-.76$  in the post-test data.

**Vocational identity.** Vocational identity was measured using 18 items from the 20-item MVS from Holland et al. (1980). The 18 items represent the individual’s sense of and

commitment to his or her identity in terms goals, skills, and passions (Holland et al., 1980). Each item stemmed from an opening line that stated, “In thinking about your present job or in planning for an occupation or career...” Example items included “I need reassurance that I have made the right choice of occupation” and “I am not sure of myself in many areas of life.” Participants responded to each item using a scale from 1 (*not true*) to 5 (*true*). The 18 items were aggregated by taking the sum of scores for the items. Using a sample of higher education students and workers, Holland et al. (1980) found KR-20 estimates of .89 for males and .88 for females; internal consistency values for these items across the 20 multiple imputation datasets in this study ranged from  $\alpha = .95$ -.95 in the pre-test data and  $\alpha = .94$ -.95 in the post-test data.

**Presence of calling.** The presence of calling was measured using 12 items from the 24-item Calling and Vocation Questionnaire (CVQ; Dik, Elridge, Steger, & Duffy, 2012). The 24 items can be conceptualized on two dimensions (search for calling or presence of calling); or, they can be conceptualized along six dimensions, search and presence for each of the three calling components identified by Dik and Duffy (2009; transcendent summons, purposeful work, and prosocial work orientation). In this study, the 12 items for presence of calling will be used. These 12 items presented participants with statements about their calling, asking them to rate the extent to which it was true of them on a scale from 1 (*Not at all true of me*) to 4 (*Absolutely true of me*). Example items included “I do not believe that a force beyond myself has helped guide me to my career” and “Making a difference for others is the primary motivation in my career.” Dik et al. (2012) reported internal consistency levels ( $\alpha = .85$ ) across the items that were satisfactory. Responses to these statements were aggregated by taking the mean of each response to create a composite score for presence of calling; internal consistency values for these items across the 20

multiple imputation datasets in this study ranged from  $\alpha = .90$ - $.90$  in the pre-test data and  $\alpha = .85$ - $.86$  in the post-test data.

**Exploratory variables.** One additional variable, strength of faith, was included in this study as a variable for *post hoc* analyses.

**Strength of faith.** Strength of faith was measured using the 10-item Santa Clara Strength of Religious Faith Questionnaire (SCSORF; Plante & Boccaccini, 1997). The 10 items are designed to measure how active and committed one is to his or her religious faith, regardless of the denomination of that faith. Students were presented with 10 statements about their faith practices and will be asked to rate their agreement with each statement using a 4-point Likert scale from 1 (*strongly disagree*) to 4 (*strongly agree*). Example items included “I pray daily” and “My faith impacts many of my decisions.” The 10 items were aggregated by taking the average of the items. Plante and Boccaccini (1997) found strong internal consistency ( $\alpha = .95$ ) and split-half reliability ( $\alpha = .92$ ) for the items; internal consistency values for these items across the 20 multiple imputation datasets in this study ranged from  $\alpha = .93$ - $.93$  in the pre-test data and  $\alpha = .88$ - $.90$  in the post-test data.

## CHAPTER III

### Results

The following sections are organized as follows. First, I describe the planned preliminary and primary analyses, followed by a discussion of both the prevalence of and my process for managing missing data within my dataset. Second, I describe findings from the preliminary analyses of this study. Finally, I describe the findings from my primary analyses and the extent to which these findings support or fail to support my *a priori* hypotheses. Given the arbitrary nature of  $p$  value thresholds and growing consensus that null findings provide meaningful information in addition to statistically significant findings (Cortina & Folger, 1998; Landis & Rogelberg, 2013; Laws, 2013), the following results are reported as statistically significant at the  $p < .05$  level, as approaching significance at the  $p < .06$  level, and as trending at the  $p < .10$  level; likewise, confidence intervals (CIs) are reported as statistically significant if the 95% interval excludes, and trending if the 90% interval excludes zero.

#### Data Preparation

Prior to testing my hypotheses, I began first by identifying preliminary and primary analyses to test my hypotheses. I then prepared and cleaned the dataset using data from both the pre- and post-test surveys. This entailed merging the datasets from each time point, analyzing missingness patterns and mechanisms using Little's MCAR Test (Enders, 2010), conducting multiple imputation as a solution to the magnitude of missing data, and creating scale scores for all variables using the newly imputed data. The detailed steps taken throughout this data preparation are described in the subsequent sections.

**Identified analyses for hypothesis testing.** The preliminary analyses in this study were threefold. First, I examined the extent to which this study met the statistical assumptions of the primary analyses by which I tested my hypotheses. Second, I assessed the reliability of my

measures, the results from which were provided in the prior [measures](#) section. Finally, I assessed the extent to which my design's use of random assignment equally distributed different types of students across the conditions. Specifically, this included  $\chi^2$  tests of demographic variables (e.g., gender, race, employment status) collected at pre-test and one-way ANOVA analyses of the mediating, outcome, and covariate variables at pre-test across the three conditions. I then continued with the primary analyses to test my hypotheses.

To test my first hypothesis (H1), I use a multiple regression approach with a coding scheme for the independent variable. Specifically, I regressed the post-test outcome measures (one per analysis) on a dichotomously coded treatment variable (0 = control group, 1 = traditional VCD), controlling for the pre-test scores for that outcome measure. This analysis allowed me to assess differences in the outcome variable between groups, controlling for the within-person nature of the outcome variable. Field (2013) notes that, while a multiple regression approach traditionally assumes independent (i.e., non-repeating) measures, the analysis is robust enough to handle data measured over up to two time points. Hypothesis 5 was tested similarly using a slightly different coding structure to assess differences between the three conditions.

There are many coding approaches that can be used when regressing an outcome on a multicategorical predictor. The criteria by which I made my coding decisions were (a) maintaining consistency with the wording of my hypotheses; and (b) ensuring that the comparisons would produce the most meaningful information for future refinement and improvement of the VCD program. Based on these criteria, I opted to use dummy coding as the direct test of my hypothesis, with a follow-up analysis using contrast coding to explore the unique added value of the spirituality-infused activities.

Using dummy coding, I treated the spirituality-infused VCD condition as the reference group compared to the control group and traditional VCD condition. For this analysis, the post-test outcome measures were individually regressed onto two sets of codes, controlling for the measure at pre-test. The results for these two codes indicated mean differences between (a) spirituality-infused VCD and the control group, and (b) spirituality-infused VCD and traditional VCD. The follow-up analysis using contrast coding entailed the same process, but with a different set of codes. For this analysis, instead of comparing spirituality-infused VCD to the other conditions individually, the spirituality-infused VCD group was compared to the control and traditional VCD groups combined, followed by a second code comparing only the control and the traditional VCD groups. Both sets of codes (dummy and contrast) are listed in [Table 4](#).

Hypotheses 2-4 and 6-8 included mediating variables, requiring an analysis of the indirect effect of my hypothesized model. As such, the mediations described in H2-H4 and H6-H8 were analyzed using the method underlying Hayes's (2018) PROCESS Macro for testing mediation in IBM SPSS 25. Specifically, the indirect effects were calculated as the product of the *a* and *b* paths for each hypothesis. However, since Hayes's (2018) PROCESS Macro does not handle imputed datasets, I calculated significance levels for these indirect effects using a partial posterior method, and 95% confidence intervals using a hierarchical Bayes method. Both of these tests have been suggested as more powerful alternatives to the traditional Sobel test commonly used with larger sample sizes (Biesanz, Falk, & Svalei, 2010; Falk & Biesanz, 2016).

For H2-H4, there were only two levels of the categorical predictor: the control group and the traditional VCD condition. This dichotomous variable was used as the predictor in the model; self-concept clarity, career decision self-efficacy, and occupational information were each used as mediators in separate analyses; and the mediator and outcome variables at pre-test were used



as covariates. These three analyses were repeated for each of the three focal outcome variables (purpose, vocation, and calling), resulting in nine total mediation analyses for H2-H4.

For H6-H8, the categorical predictor included a third level (the spirituality-infused VCD condition). As such, I tested these mediation hypotheses using the dummy codes described previously for testing H5 as the predictors, based largely on the process used by Hayes and Preacher (2014). This allowed me to examine the indirect effect of (a) the spirituality-infused VCD condition compared to the control group, and (b) the spirituality-infused VCD condition compared to the traditional VCD group for each of the mediator-outcome relationships. Again, the two codes were used as predictors; self-concept clarity, career decision self-efficacy, and occupational information were used as mediators; and the mediator and outcome variables at pre-test were used as covariates. These three analyses were repeated for each of the three focal outcome variables (purpose, vocation, and calling), resulting in nine total mediation analyses for H6-H8, each with two indirect effects.

Lastly, as *post hoc* exploratory analyses, I also examined the role of strength of faith as a moderator in H1 and H5; specifically, I explored how strength of faith changed the influence of the program on the outcome variables. In addition, I also reanalyzed H2-H4 and H6-H8 with similar analyses examining the mediators happening in parallel form (i.e., all at the same time) as opposed to individually for each of the three focal outcome variables.

**Missingness, imputation, and data cleaning.** Missingness in the dataset was analyzed and explored using the multiple imputation tools in IBM SPSS Statistics 25. The pre-test and post-test datasets were merged according to an ID variable (the participant's unique email address), and the final merged dataset of individuals who consented to our use of their Field Guide data included a total of 127 cases. However, due to attrition between pre- and post-test

surveys, only 94 of these cases included complete, usable data at both time points. To test if this attrition was related to the condition (i.e., if students in one condition were more likely to not take the post-test survey than students in another), I conducted a  $\chi^2$  test of attrition by condition. Results from this analysis indicated that attrition rates did not statistically significantly vary by condition ( $\chi^2[2] = 4.367, p = .113$ ).

When looking within each dataset (pre- and post-test data), a visual inspection of missing value patterns indicated minimal missingness that might be characterized as a haphazard pattern, as described by Enders (2010). This pattern of missingness is not problematic within each dataset, but problematic missingness did surface when using the merged dataset due to 26% of the cases having missing data (see [Figure 2](#) for the number and percentage of missing/imputed data). Several imputation and deletion approaches could have been taken to address this missingness, but not all approaches are equal in their ability to produce a usable, minimally biased, and adequately powered dataset. For instance, one consideration was to use the traditional approach of listwise deletion, which entails removing those participants who did not complete both surveys. Yet, this can drastically reduce the sample size and thus the power to detect significant effects; it can also bias the results if data are not missing completely at random (MCAR). For these reasons, assessing the degree to which the missing data were MCAR was essential for making a decision between listwise deletion or multiple imputation. When the MCAR requirement is satisfied, then it is *less likely* that differential attrition will bias the results, though still possible to a statistically nonsignificant degree. Upon examining missingness mechanisms in this data, it appears that this was the case here.

The missingness in the combined dataset produced a statistically nonsignificant Little MCAR's test even when using the participant's condition to inform the model, suggesting that

the MCAR assumption had not been violated (or that the analysis was not sufficiently powered to detect a significant MCAR violation). However, when visually inspecting pre-test scores using only the data for individuals who completed both surveys, there were several visually noticeable differences in outcome variables between the conditions at pre-test. In other words, when using a listwise deletion approach, groups were not equally distributed in terms of the outcome variables at the pre-test assessment. This is problematic because the use of random assignment in this study should in theory prevent this from happening, and one of the few phenomena that can interfere with RA's ability to do exactly this is the use of listwise deletion in the presence of differential attrition (Shadish, Cook, & Campbell, 2002).

For these reasons, a stochastic method of multiple imputation was used as an alternative approach to listwise deletion based on recommendations from Olinsky et al. (2013). Even with approximately 13% of the merged dataset values missing across 26% of the cases, Enders (2010, 2017) suggests that multiple imputation can be a robust and flexible approach for handling attrition-caused data. Since there were more variables than cases in the dataset, the following steps were taken in the multiple imputation process. First, the dataset was divided into two roughly equal portions and data were imputed at the item-level. Each half of the data contained several components: *noninformative variables* such as the participant's ID number, which were neither imputed nor used as a predictor; *placeholder composite scale scores* calculated using the items in the alternative dataset, based on recommendations from Little, McConnell, Howard, and Stump (2008) as a way to maintain the structure of the entire dataset; *auxiliary variables* such as age, employment status etc. which were not imputed but could inform the imputed data; and the *items to be imputed*. Placeholder scale scores and auxiliary variables were used as predictors only.

The fully conditional specification (MCMC) procedure was used for the imputation, with maximum case draws specified at 100 and maximum parameter draws at 25. Simulations from Graham, Olchowski, and Gilreath (2007) suggest that an imputation of 20 datasets from which to pool results can produce findings that are minimally biased and sufficiently powered. As such, I imputed 20 sets within each dataset. After running the imputation in both halves of the dataset, the two files were merged by matching the imputation and an ID variable. Overall, this process resulted in a final dataset with 20 imputed sets of 127 complete data points for all items at pre- and post-test measurements.

### **Preliminary Analyses**

Using complete data for the 127 cases over 20 imputed datasets, I began with preliminary analyses to assess the degree to which the assumptions for my hypotheses were violated; the degree to which the scales calculated in my dataset demonstrated sufficient reliability; and the degree to which random assignment sufficiently equalized the qualities of participants in each condition. Scale reliability was reported in the prior measures section and will therefore not be reported again here. A summary of the descriptive statistics and correlations between scales is provided in [Table 5](#); and in the following sections, the two additional preliminary analyses are discussed.

**Assumptions for statistical analyses.** Hypotheses 1 and 5 were both analyzed using multiple regression and a form of categorical coding to make comparisons between conditions; to assess the mediating mechanisms between program and outcome in H2-H4 and H6-H8, I used Hayes's (2018) recommendations for calculating indirect effects as the product of the *a* and *b* paths. Together, these analyses entail a set of statistical assumptions required for accurate inferences. These assumptions include having (a) normally distributed mediators and outcome

variables within each condition; (b) normally distributed residuals in the relationships between the mediating and outcome variables; (c) linearity between the mediating and outcome variables; (d) equality or homogeneity of variance in mediators and outcome measures between the three conditions; (e) homoscedasticity in the relationships between mediators and outcome variables; (f) and a correctly specified model with appropriate, interval/ratio scales for the measures.

Assumptions (a), (b), and (c) were assessed visually, given Field's (2013) suggestions and warnings about the sensitivity of statistical tests for the significance of z-scores, skewness, and kurtosis. Visual inspections of scatterplots between mediators and outcome variables, histograms of scores within conditions, and histograms of residual values from pooled mediator-outcome regression analyses revealed sufficiently normal distributions and linear relationships; thus, no transformation or false dichotomizing was used for any items or scales. Assumptions (d) and (e) were assessed statistically and visually, respectively. To assess equality of variance between conditions for the three mediators and outcome variables, Levene's test was used.

The Levene's value was trending toward significance for strength of faith at pre-test in 14 of the 20 imputed datasets, and was trending toward significance for knowledge of occupational information at post-test in seven of the 20 imputed datasets; it was statistically significant for this variable in one of the datasets ( $F[2,124] = 3.077, p = .049$ ), and approaching significance in another ( $F[2,124] = 3.019, p = .052$ ). As such, corrected statistics were used for analyses including these variables when possible. When looking at assumption (e) visually, there was not sufficient reason to suspect that there were too high of levels of heteroscedasticity between mediators and outcomes. Lastly, assumption (f) was assessed in this study by comparing the results from my hypothesized model to those of an exploratory model where all mediators occur

in parallel form; in addition, all mediating and outcome variables were measured using an interval scale.

**Evaluating the effectiveness of random assignment.** To assess how well the use of random assignment equally distributed various confounding and other characteristics of the sample across the three conditions, I conducted  $\chi^2$  tests to examine the representation of gender, sexual orientation, year in program, employment status, and race. Using the original, non-imputed data (because I did not impute demographic information), no  $\chi^2$  tests revealed significant differences across conditions in representation of gender, sexual orientation, year in program, and race. Employment status, however, was approaching significant variation in its representation by condition. Students in the spirituality-infused condition were slightly (at the trending toward significance level) more likely to not be working than students in the traditional VCD condition, who were also slightly more likely to not be working than students in the control group ( $\chi^2[6] = 11.685, p = .069$ ). Since age is a continuous variable, I assessed the extent to which ages were represented equally across the conditions by conducting a one-way ANOVA with age as the dependent variable; this revealed no significant difference in average age across conditions.

Finally, I also assessed the degree to which the use of random assignment equally distributed levels of the three mediators and outcome variables at pre-test. This was analyzed by conducting a one-way ANOVA with the independent variable as the three experimental conditions, and the dependent variables as the three mediators and outcome variables. There were significant pre-test differences between the three conditions at pre-test for the self-concept clarity and vocational identity scales; in both cases, the spirituality-infused VCD condition demonstrated statistically significantly higher average scores compared to the control group, but

not to the traditional VCD condition ( $t_{Self-Concept\ clarity}[83] = -2.703, p = .012; t_{Vocational\ identity}[83] = -2.503, p = .012$ ). While this is not ideal, Shadish et al. (2002) describe how this can at times happen when sample sizes are somewhat low. For now, not much can be done to mitigate or control for this pre-test group difference. That said, it can be something to keep in mind when interpreting the results discussed in the subsequent section.

### **Primary Analyses**

In H1, I hypothesized that participation in the traditional VCD condition would lead to higher levels of (a) presence of purpose, (b) vocational identity, and (c) presence of calling compared to a control group of no participation in vocational career development activities. To analyze this data, I used a multiple regression approach, regressing the post-test outcome variable on a categorical coding (0 = control, 1 = traditional VCD), controlling for the outcome measure pre-test scores. Reporting the pooled results here (see also [Table 6](#)), the analyses did not reveal significant differences between control group and the traditional VCD condition in measures of purpose ( $B = -0.147, p = .266$ ), vocation ( $B = -0.079, p = .531$ ), or calling ( $B = -0.052, p = .554$ ) after controlling for those measures at pre-test. This suggests that there were no statistically significant increases in sense of purpose, vocation, and calling for traditional VCD activities compared to the control group; thus, H1 was not supported.

Despite a lack of statistical evidence for the direct effect of the traditional VCD program on purpose, vocation, and calling, it is possible for the indirect effect to still be statistically significant (Hayes, 2009; Hayes & Rockwood, 2017). As such, I continued with testing H2-H4 using the process underlying Hayes's (2018) PROCESS Macro for testing mediation. Specifically, these indirect effects were calculated as the product of the *a* and *b* paths for each hypothesis, with significance levels calculated using a partial posterior method and confidence

intervals calculated using a hierarchical Bayes method (Biesanz et al., 2010; Falk & Biesanz, 2016). Each indirect effect was tested individually. Results of the mediation analyses using pooled regression estimates from the 20 imputed datasets indicated that there was no statistically significant indirect effect for self-concept clarity, career decision self-efficacy, or knowledge of occupational information on any of the three outcomes. Full results from these nine mediation analyses are reported in [Tables 7-15](#); overall, H2-H4 were not supported.

In H5, I hypothesized that participation in spirituality-infused VCD activities would lead to (a) presence of purpose, (b) vocational identity, and (c) presence of calling when compared to both a control group of no participation in VCD activities and a group participating only in traditional VCD activities. To test this hypothesis, I used a multiple regression approach with a dummy coding structure and a follow-up contrast coding structure (see [Table 4](#) for these coding structures). I individually regressed each outcome variable on the various codes controlling for that outcome measure at pre-test. According to the pooled results, the data suggest that participation in the spirituality-infused VCD condition contributed to significant differences in certain outcomes variables when compared to the control group and the traditional VCD condition (see [Table 16](#) for full results, and [Figures 3-5](#) for the line graphs of change over time in the three outcome measures by condition).

Specifically, students in the traditional VCD condition demonstrated significantly lower scores for sense of purpose compared to students in the spirituality-infused VCD condition, after controlling for pre-test sense of purpose ( $B = -0.326, p = .014$ ). This means that there was an increase of 0.326 on the 6-point scale for sense of purpose for students in the spirituality-infused VCD group compared to the traditional VCD group. Across the imputed datasets, adding this comparison to the model contributed an additional 2.0% to 5.0% of the variance in sense of



purpose ( $\Delta F = 3.057$  to  $9.372$ ,  $p = .002$  to  $.084$ ). When looking at vocational identity, however, the data suggest that participating in spirituality-infused VCD activities did not lead to increases in vocational identity when compared to the control group ( $B = -0.033$ ,  $p = .811$ ) or the traditional VCD condition ( $\beta = -0.111$ ,  $p = .428$ ). That said, when running the analyses for presence of calling, a pattern emerged in the results that was similar to the findings for sense of purpose.

In particular, students in the traditional VCD condition demonstrated significantly lower scores for presence of calling compared to students in the spirituality-infused VCD condition, after controlling for presence of calling in the pre-test survey ( $B = -0.226$ ,  $p = .015$ ). This means that there was an increase in 0.226 on the 4-point scale for presence of calling for students in the spirituality-infused VCD group compared to the traditional VCD group. Across the imputed datasets, adding this comparison to the model contributed an additional 1.7% to 5.1% of the variance in presence of calling ( $\Delta F = 4.440$  to  $12.425$ ,  $p = .001$  to  $.035$ ). Likewise, presence of calling scores for students in the control group compared to the spirituality-infused VCD condition were slightly lower and approaching significance after controlling for pre-test presence of calling ( $B = -0.176$ ,  $p = .053$ ). This means that there was an increase of 0.176 on the 4-point scale for presence of calling for students in the spirituality-infused VCD group compared to the control VCD group.

These findings suggest that participation in the spirituality-infused condition activities led to some degree of increase in sense of purpose or calling when compared to the control or traditional VCD conditions individually. The follow-up contrast code analyses add to this understanding by providing information about increases in these outcomes when comparing the spirituality-infused condition to all other conditions combined. Specifically, students in the

spirituality-infused VCD condition demonstrated significantly higher scores for sense of purpose compared to students in other conditions, after controlling for pre-test sense of purpose ( $B = 0.169, p = .026$ ). This suggests that there is an increase of 0.169 on the 6-point scale for sense of purpose for students in the spirituality-infused VCD condition compared to those in either the traditional VCD or control conditions. Across the imputed datasets, adding this comparison to the model contributed an additional 1.7% to 4.0% of the variance in sense of purpose ( $\Delta F = 3.225$  to  $7.457, p = .007$  to  $.075$ ).

When using this coding structure for vocational identity, the results again suggested no statistically significant increases in vocational identity as a result of participation in the spirituality-infused VCD condition. Lastly, when re-analyzing the data for presence of calling using this coding structure, a pattern emerged that was similar to the findings for sense of purpose. Students in the spirituality-infused VCD condition demonstrated significantly higher scores for presence of calling compared to students in other conditions ( $B = 0.134, p = .013$ ). This suggests that there is an increase of 0.134 on the 4-point scale for presence of calling for students in the spirituality-infused VCD condition compared to those in either the traditional VCD or control conditions. Across the imputed datasets, adding this comparison to the model contributed an additional 1.5% to 4.8% of the variance in presence of calling ( $\Delta F = 3.611$  to  $11.170, p = .001$  to  $.060$ ). Overall, these findings suggest that H5 was supported for sense of purpose (H5a) and presence of calling (H5c), but not for vocational identity (H5b).

Finally, I tested H6-H8 again using the process underlying Hayes's (2018) PROCESS Macro for testing mediation, with the mediator-outcome relationships tested individually, controlling for pre-test scores on both the mediators and outcomes for each analysis. Results of the mediation analyses using pooled regression estimates from the 20 imputed datasets indicated

that there was not a statistically significant indirect effect of self-concept clarity, career decision self-efficacy, or knowledge of occupational information on vocational identity and presence of calling for either of the comparisons (spirituality-infused VCD compared to control group and compared to the traditional VCD condition). For sense of purpose, however, there were three indirect effects that were either approaching significance or trending toward significance for certain mediating variables (see [Tables 17-25](#) for full results).

In the model with self-concept clarity as a mediator to sense of purpose, the indirect effect was approaching significance when comparing those in the spirituality-infused VCD condition to those in the control group ( $B_{ab} = -0.091$ ,  $p = .053$ , 90% CI = -0.189 to -0.008). This comparison was trending toward statistical significance when comparing those in the spirituality-infused VCD condition to those in the traditional VCD condition ( $B_{ab} = -0.085$ ,  $p = .072$ , 90% CI = -0.184 to -0.002). The one additional indirect effect that was trending toward statistical significance occurred when comparing the control group to the spirituality-infused VCD condition in the model with career decision self-efficacy as a mediator to sense of purpose ( $B_{ab} = -0.085$ ,  $p = .080$ , 90% CI = -0.185 to -0.001). In sum, H7 and H8 (vocational identity and presence of calling as the outcomes in the mediated models, respectively) were not supported, but H6 was partially supported. The results suggest that self-concept clarity and career decision self-efficacy may be causal mechanisms to sense of purpose when looking at the effect of the spirituality-infused VCD condition compared to the control group and traditional VCD condition.

### **Exploratory Analyses**

Lastly, I conducted two *post hoc*, exploratory analyses. First, I re-analyzed the data to test H1 and H5 with an added interaction term in the multiple regression: strength of faith. Second, I

combined H2-H4 to analyze the model with the mediators in parallel form as opposed to individual form; this *post hoc*, exploratory analysis was also conducted for H6-H8.

**Strength of faith as a moderator of program effectiveness.** To explore the possibility that strength of faith might moderate the relationship between participation in the VCD intervention and the three outcome variables of sense of purpose, vocational identity, and presence of calling, I first conducted the same multiple regression analysis used to test H1, this time adding strength of faith and the interaction of strength of faith with the code for the traditional VCD condition compared to the control group. Results from this analysis (see [Table 26](#)) suggest that strength of faith did not interact with the influence of the traditional VCD condition on vocational identity and presence of calling. There was, however, an interaction that was trending toward significance when examining sense of purpose.

Overall, students in the traditional VCD condition did not demonstrate significantly different sense of purpose scores than those in the control group; but, this finding depended on one's strength of faith ( $B_{condition*strength\ of\ faith} = -0.250, p = .099$ ). For individuals with lower initial strength of faith, there seemed to be minimal difference in sense of purpose between the control and traditional VCD conditions; yet, for individuals with higher strength of faith, students in the traditional VCD condition appeared to have lower sense of purpose scores than those in the control group. Following this analysis, I ran a similar test to assess the influence of strength of faith on the effect of the spirituality-infused VCD condition on the outcome variables.

The interaction in this *post hoc* analysis was not statistically significant for any of the outcome variables when comparing the spirituality-infused VCD condition to the control group; it also was not significant when comparing the spirituality-infused VCD condition to the traditional VCD condition for sense of purpose and vocational identity. The only interaction term

approaching significance occurred when comparing the spirituality-infused VCD condition to the traditional VCD condition for presence of calling. Overall, students in the spirituality-infused VCD condition demonstrated significantly higher post-test presence of calling scores than those in the traditional VCD condition; but, the results suggest that this depended on one's strength of faith (see [Table 27](#)).

Specifically, when looking only at individuals with lower strength of faith, the difference between these two conditions was more pronounced and approaching significance ( $B_{condition*strength\ of\ faith} = 0.204, p = .061$ ). In other words, for students with higher strength of faith scores, there was minimal differences in post-test presence of calling between conditions. Yet, for students with lower strength of faith scores, participating in the spirituality-infused condition contributed to much higher presence of calling scores compared to those in the traditional VCD condition.

**Parallel mediation.** The final *post hoc*, exploratory analyses in this study entailed assessing the influence of the program activities on outcome variables through parallel multiple mediation. These analyses were conducted by repeating the prior analyses for H2-H4 and H6-H8 using Hayes's (2018) PROCESS Macro steps with pooled estimates from the 20 imputed datasets. Consistent with the findings from the analysis for H2-H4 (individual mediators for the traditional VCD intervention), this *post hoc* analysis did not reveal any significant indirect effects when the mediators were entered in parallel form (see [Table 28](#) for full results).

Lastly, I also conducted the same analysis for H6-H8 with parallel mediation to assess the effect of participation in the spirituality-infused VCD condition (compared to control group and traditional VCD condition) on the three outcome variables (see [Table 29](#) for full results). This analysis entailed partitioning the variance in the outcome measures among the three mediators at

post-test, the three mediators at pre-test (as covariates), the outcome at pre-test (as a covariate), and the two dummy coded predictors. With nine predictors in the model, this analysis was likely underpowered using the current dataset. That said, when conducting these *post hoc* analyses, the previously nonsignificant indirect effects using vocational identity and presence of calling as the outcomes remained statistically nonsignificant, as did the indirect effect of knowledge of occupational information on sense of purpose.

Two of the prior significant indirect effects dropped from significance in the parallel mediation model. The indirect effect for career decision self-efficacy on sense of purpose when comparing the spirituality-infused condition to the traditional VCD condition was no longer significant, and the indirect effect for self-concept clarity on sense of purpose when comparing the spirituality-infused condition to the traditional VCD condition was also no longer significant. Although both of these indirect effects continued to demonstrate significance levels that were either approaching significance or trending, the 90% CI using hierarchical Bayesian estimates failed to exclude zero; they were, therefore, considered to have dropped from statistical significance. The one indirect effect that remained approaching significance was observed in the model with self-concept clarity as a mediator to sense of purpose for those in the spirituality-infused VCD condition compared to the control group ( $B_{ab} = -0.057, p = .061, 90\% \text{ CI} = -0.133 \text{ to } -0.002$ ).

## CHAPTER IV

### Discussion

The findings from this study provide a compelling argument for the use of spiritual discernment exercises in vocational counseling. Specifically, students were randomly divided into three groups: a control group, a group participating in traditional VCD activities (e.g., resume building, networking, informational interviews), and a group participating in spiritual discernment activities (e.g., prayer, reflection, meditation) in addition to traditional VCD activities. Sense of purpose, vocational identity, and presence of calling were measured both before and after participating in these activities. Students who only participated in traditional VCD activities showed no significant increases in purpose, vocation, or calling compared to the control group. Conversely, students who participated in spiritual exercises in addition to traditional VCD activities showed significantly greater increases in sense of purpose and presence of calling compared to those in other conditions. In other words, participation in both traditional VCD *and* spiritual discernment activities was an effective way to cultivate calling and purpose, but participation in only traditional VCD activities was not.

I also measured self-concept clarity, career decision self-efficacy, and knowledge of occupational information to better understand how or why the program was effective in cultivating purpose and calling. The findings suggest that self-concept clarity and career decision self-efficacy may be important factors in explaining why participation in spiritual discernment activities leads to a stronger sense of purpose. Lastly, I also considered whether or not a student's strength of faith played a role in this finding. Surprisingly, it was not the students with stronger strength of faith who demonstrated better outcome scores for calling and purpose. Rather, it was

the students with lower strength of faith scores who benefited most from the program in terms of these vocational outcomes.

Perhaps the most recent and similar research on these topics comes from Dik and Steger (2008) who evaluated two career development programs—one grounded in person-environment fit theory aimed at career choice, and another which they termed as calling/vocation-infused. The latter was aimed at cultivating a sense of meaning and a worldview of career as a vocation. These programs were compared in their effects on career decision self-efficacy and meaning in life. While the calling/vocation-infused workshop led to increases in career decision self-efficacy in their research, it did not out-perform the person-environment fit approach, nor did it have a significant impact on meaning in life. The present study used a similar comparison but included different outcomes, namely sense of purpose, vocation, and calling. Contrary to Dik and Steger's (2008) findings, this study suggests that spiritual discernment activities within VCD may be effective for fostering outcomes like purpose and calling compared to only engaging in traditional VCD activities. The findings suggest several implications for both VCD practice and theory, as described in the subsequent pages, along with a discussion of avenues for future research. Finally, I close this chapter with a discussion of the present study's limitations.

### **Implications for Practice**

The nature of this study's design makes it somewhat challenging to tease apart what specific VCD aspects contributed to the gains in purpose and calling, making it similarly challenging to identify implications for practice based on this research. Nevertheless, there are several suggestions that are aligned with the findings from this work as well as the current theory and best practices in VCD (see Brown & Ryan Krane, 2000; Oliver & Spokane, 1988; Spokane & Oliver, 1983; Whiston et al., 1998). As such, these suggestions are discussed below.



**Spiritual discernment is a significant “value-add” in VCD.** One of the more salient implications from the present study is that spiritual discernment practices offer potential for fostering a sense of purpose and calling in VCD. This is even more noteworthy when considering the amount of noise and uncontrollable forces that existed in the way this program was implemented (e.g., students having other course requirement, various events on-campus, life events). Despite these forces, students who participated in spiritual discernment showed significantly larger gains in purpose and calling compared to those who only participated in traditional VCD activities. Moreover, these gains only took place for students in the spirituality condition; there were no significant gains for students participating in traditional VCD activities alone. In other words, the program only worked for fostering vocational outcomes like calling and purpose when traditional activities were done alongside spiritual discernment exercises.

This finding warrants further attention to the activities that were used in the spirituality-infused VCD program, in addition to the spiritual tradition upon which the program was designed. Specifically, the spiritual discernment activities used in this program included (a) daily contemplative prayer designed to encourage reflection of important emotions and cognitions throughout the day; (b) an activity for students to find “sabbath” or rest by detaching from life-stressors or distractions that make thoughtful reflection more challenging; and (c) three activities providing instruction and reflection questions on discernment (one on discerning individually, one on discerning in community, and a third on using discernment to guide decisions-making).

These activities were designed to encourage students in a deeper and more contemplative reflection of their experiences, their journey throughout life, and particular moments where they have felt a sense of meaning while discerning career paths. This role of meaning was essential in the present study based on the stream of past vocational work that has continued to implicate

meaning as a centerpiece for purpose, vocation, and calling (Damon et al., 2003; Dik & Duffy, 2009). However, the activities were not only designed to build an awareness and capacity for exploring meaning; they were also heavily informed by Ignatian spirituality principles of being contemplative in action, detached from distractions, and trusting that good nature and the transcendent are both omnipresent and incarnate—that is, real and relevant in our lives. Of course, no spiritual tradition has a monopoly on the use of spiritual exercises in vocational counseling. That said, the findings from this work suggest that there is potential for even richer and more impactful vocational counseling when the practice incorporates spiritual discernment activities like these alongside traditional VCD activities.

These spiritual discernment activities should encourage reflection and exploration of two aspects in particular: (a) what one finds meaningful in life, and (b) a relationship with the transcendent. This can entail traditional spiritual practices such as prayer (petitionary, contemplative, or imaginative, etc.), or it can simply involve reflection and meditation on how one detaches from distractions and stressors, discerns life's important decisions, and discerns within communities. In either case, there is potential for more enriching and impactful vocational care when these qualities are incorporated into the service provided. In addition to these spiritual discernment exercises, this study also further affirms past work on the key ingredients when providing vocational care.

**Important ingredients for VCD are still pivotal for success.** The program used in this study incorporated the five key VCD ingredients from Brown and Ryan-Krane's (2000) meta-analysis either indirectly or directly to varying degrees. Specifically, the use of written exercises, individualized feedback, and support-building were all incorporated into the spiritual discernment exercises program. These characteristics were more salient in the spirituality

condition than in the traditional VCD condition simply from having more interaction with the career counselors implementing the program. In addition, modeling and providing occupational information were also incorporated, but somewhat indirectly through activities and encouragement of interacting with mentors and role models regarding specific career interests. It may be difficult to point to any one of these ingredients as the source of increases in vocational outcomes over time, but at a minimum, findings from this study suggest that these ingredients are relevant aspects of vocational counseling. Overall, the use of these ingredients coupled with the integration of spirituality in vocational counseling seems to be a powerful way to foster purpose and calling. Yet, this finding begs the questions of why and how. As I discuss below, the observed value of spirituality in VCD warrants an exploration of why such practices work. What makes traditional career development activities more effective when infused with spirituality?

**Clarity and confidence matter.** If spiritual exercises make the difference for cultivating purpose and calling compared to only traditional career development practices, what is happening within that process? In other words, what happens when engaging in spiritual discernment? This is a broader question than this study can answer completely, but one implication of this work is that self-concept clarity and career decision self-efficacy matter. These concepts can be thought of as clarity and confidence—clarity about one's identity and confidence about making career decisions. In this study, these two concepts played a noticeable role in the impact of the program. When looking at sense of purpose, increases in clarity and confidence were key processes through which the program was effective. Specifically, engaging in spiritual discernment alongside traditional career development practices led to increases in confidence and clarity, which in turn led to increases in one's sense of purpose. This finding suggests that engaging in spiritual discernment to develop one's sense of purpose works through

a process of building clarity and confidence. This is an important finding for practitioners because it can inform how to create and implement future programs for cultivating a sense of purpose. In particular, practitioners creating VCD programs that use spiritual discernment may benefit from being intentional about designing activities oriented toward clarity and confidence.

That said, it is also surprising that these factors did not play a role when looking at vocation and calling, nor did knowledge of occupational information play a role in the influence of this program on any outcome. There are many reasons why this may be the case, but one that deserves acknowledgement is that vocation and calling might require different inputs, and knowledge of occupations may facilitate different outputs. In other words, perhaps the more specific dimensions of vocation and calling are developed through processes that were not measured here. Likewise, it is possible that occupational information is oriented more toward outcomes related technical competency as opposed to the vocational experience outcomes studied here. Again, the implication for practice here is the same; when designing programs for vocational counseling, intentionality and forethought is essential for identifying valuable program activities and the appropriate outcomes of those activities.

Overall, the role of confidence and clarity in enhancing one's sense of purpose offers practitioners valuable guidance when designing spirituality-based VCD programs. This, coupled with the aforementioned practical implications, suggests that vocational outcomes may be best developed through programs that (a) integrate spiritual discernment alongside traditional VCD activities; (b) incorporate the recommendations from prior research and theory on best practices within VCD (e.g., written exercises, feedback); and (c) are designed with intentional thought given to how the activities foster a deeper knowledge of oneself and greater confidence in one's

ability to make career decisions. In addition to these suggestions for practice, the present research also offers several implications for VCD theory and avenues for future research.

### **Theoretical Implications and Avenues for Future Research**

Findings from the present study suggest that spirituality-infused VCD interventions show promise for cultivating vocational outcomes like purpose and calling. Yet, there is a paucity of empirical evidence and momentum to incorporate spirituality into vocational research within the VCD field. As such, in the following sections, I describe several implications and avenues for future research from the present study for researchers in the field of VCD seeking to use multidisciplinary and innovative approaches for vocational counseling.

**The need for a spirituality-infused theory of VCD.** In their prior work describing how the concept of calling fits within current theoretical perspectives in vocational psychology, Dik et al. (2009) suggested that new theoretical perspectives are not necessary for the study of calling in VCD interventions. Rather, they put forth a convincing argument that calling-infused approaches to VCD can be easily integrated into existing vocational theories (e.g., P-E fit models, constructivist/narrative approaches, life-stage models). In other words, the argument was made that current theoretical perspectives in vocational psychology are robust enough for studying and practicing a form of VCD that incorporates calling and its related existential topics.

The findings of the current study suggest that spiritual discernment practices (a calling-infused approach to VCD) may play a significant role in fostering vocational outcomes through heightened self-concept clarity and career decision self-efficacy. When considering this finding, however, it is difficult to locate a traditional VCD theory that *sufficiently* captures the richness of spiritual discernment as a factor in this process. It may be the case that spirituality-based approaches can be integrated or blended into these well-established theories, but a question

remains as to whether or not such theories are sufficient for understanding and explaining the experience of spirituality. Specifically, past theories of vocational counseling do not provide much discussion of the role of a transcendent summons in shaping vocational outcomes. Perhaps due to this limitation, they also do not give much acknowledgement to healthy and effective methods for exploring and interacting with the transcendent. Finally, they also do not offer explicit guidance or suggestions for what spiritual values or traditions may be helpful for guiding one's vocational discernment.

This raises a question, then, of what components would comprise a spirituality-based VCD theory within vocational psychology. It is quite possible that the question has been avoided altogether due to the complex nature of spirituality and difficulties with measuring its multiple dimensions (Hill et al., 2000). Alternatively, perhaps there is a disinterest in empirically studying spirituality given its emphasis on and orientation toward the unmeasurable concept of the transcendent. Although it may be a legitimate philosophical assumption that certain aspects of the transcendent are not suitable for empirical research in the social sciences, this does not preclude the study of the principles, beliefs, and behaviors that may exist within a spiritual tradition. To elaborate, we may not be able to study the transcendent itself, but that does not mean that the study of different behaviors and orientations toward the transcendent are also outside the realm of what can be empirically studied. Of course, a tremendous amount of future research is needed to sufficiently address the question of what would comprise a spirituality-based VCD theory. Nevertheless, one suggestion from the present study that may serve as a starting point in that endeavor is the role of spiritual values or principles used to guide a spirituality-based VCD intervention.

In the present study, five specific principles or spiritual values were used to guide the creation of the VCD program designed. These values were (a) detachment from that which prevents free discernment, (b) encouragement of being contemplative in action, (c) the belief that the transcendent is fully present in reality, (d) the view that the transcendent is incarnate or compassionate, and (e) the encouragement of balancing spiritual discernment with pragmatic decision-making. These values emerge from the Ignatian spirituality tradition (see Martin, 2012), and the findings from the current study suggest that they may be important elements to consider when designing effective spiritual discernment programs. Yet, current theories in vocational psychology offer very little in terms of conceptualizing the role of these values within career development. For these reasons, one theoretical implication of the present study is that the field of VCD research may benefit from a specific theoretical paradigm within which spirituality can be conceptualized as a valuable practice for vocational counseling. The five values used in designing the program of the current study may serve as a starting point, but further research is needed to develop a more complete theory of the role of spiritual discernment in VCD.

**What matters in addition to confidence and clarity?** In this study, self-concept clarity and career decision self-efficacy appeared to modestly mediate the relationship between spiritual discernment practices and a sense of purpose. This suggests that confidence and clarity are important considerations when designing vocational counseling programs that integrate spiritual discernment practices. Moreover, this raises several questions about how we understand clarity and confidence as mechanisms that explain the effect of spirituality-infused VCD on vocational outcomes. For instance, what purposes do clarity and confidence serve in the spiritual discernment of career paths? From a self-determination theory perspective, perhaps clarity and confidence empower individuals to take ownership and experience a sense of agency in their

discernment (Bandura, 2001, 2006; Ryan & Deci, 2000). If this is the case, there may be additional mechanisms in line with self-determination theory that could be studied within this model (e.g., autonomy, competence, relatedness, a sense of agency, psychological ownership). Future research exploring the various mechanisms related to confidence and clarity may benefit practitioners and researchers alike by informing their decisions in designing and implementing vocational counseling programs.

In addition to the observed mediators in this study, there is also a remaining question as to why certain mediators failed to significantly mediate this relationship between the program and certain outcomes? There are many potential reasons why a mediator may be statistically nonsignificant, and it can be challenging to tease apart what is due to statistical artifacts versus a truly nonsignificant mediation. For this reason, future research is needed to explore the role of various mechanisms through which spiritual discernment programs serve their users.

One example of this future research is the exploration of contradictory mediators occurring simultaneously. For instance, researchers and practitioners designing and evaluating vocational counseling programs may benefit from giving further consideration to multiple mediators existing within VCD interventions. Because of these multiple mediators, it may be the case that some mediators cancel out the effect of others. An example of this could be the development of knowledge of occupational information on presence of calling. Perhaps a VCD intervention facilitates a presence of calling by building one's knowledge of occupational information. However, it might also be the case that the intervention simultaneously increases the individual's awareness of many different occupational opportunities available, making him or her less confident in a sense of calling simply from being overwhelmed by the many different choices to consider in terms of a career. In other words, the increased awareness of different



choices may be working against these ideal positive outcomes (Schwartz, 2004). Thus, two mediators can occur at the same time and would only be known if both were measured and tested within the mediation model. As such, continued research on potential co-occurring mediators in VCD interventions may be valuable for better understanding how VCD interventions contribute to vocational outcomes.

A second area for future research with regard to these indirect effects is the possibility of a moderator that may be masking the observed indirect effect. Currently, the field of VCD research seems minimally interested in individual difference moderators with regard to program effectiveness; this may be a notable avenue for future research on the role of spirituality-infused VCD in cultivating vocational outcomes. Specifically, it could be the case that indirect effects are strongly or only statistically significant for individuals demonstrating certain personality or other individual difference qualities. For example, perhaps the nature of positive and negative affect coloring one's perception of reality may influence how one experiences discernment of various careers (e.g., Brief, Butcher, & Roberson, 1995; van den Berg & Feij, 2003). Likewise, perhaps those with varying levels of the five factor model personality traits may demonstrate unique experiences in terms of spirituality and spiritual discernment (MacDonald, 2000; Piedmont, 1999). These are only a few examples, and future research on these and other qualities may be valuable for optimally designing VCD programs to be tailored to the personalities and needs of their participants.

Lastly and perhaps somewhat obviously, alternative causal models with additional potential mediators are both warranted and necessary for better understanding the influence of spirituality-infused VCD on vocational outcomes. Specifically, the present study fails to include any mediator that explicitly relates to interaction or engagement with what one believes to be the

transcendent, a crucial aspect of the definition of calling. Thus, future research on spirituality-infused VCD as it relates to one's calling and purpose may benefit from such consideration.

**The role of strength of faith in spirituality-infused VCD.** One final theoretical implication from the present study stems from the two small interactions of program participation with strength of faith. Findings from the present study suggest that the difference between impact of the program on purpose and calling was more pronounced for individuals with lower strength of faith scores. Specifically, those who participated in traditional VCD activities and had lower strength of faith were more likely to have greater sense of purpose at the end of the program. Likewise, those who participated in spiritual VCD activities and had lower strength of faith were likely to have greater presence of calling at the end of the program. Together, this suggests that individuals who benefited the most in sense of purpose from traditional VCD, and individuals who benefited most in presence of calling from spiritual VCD, were those who went into the program with lower strength of faith scores.

Given the current lack of individual difference research in VCD intervention evaluation, a theoretical explanation for this interaction is not readily apparent. It may be the case that individuals with lower strength of faith are less rigid and structured, which may come with greater open-mindedness to different ideas and perspectives; this free-spirited quality could then be a facilitator of that individual's discernment and exploration. It could also be the case that those with higher strength of faith scores clashed with certain theological tenets of the spirituality-infused VCD condition or were offended by the lack of spiritual concepts within the traditional VCD intervention. In both cases, this could have led the student to lose interest in the VCD program offered. Regardless, further research is needed to explore this interaction and other individual difference moderators in VCD.

### **Limitations**

There are several limitations of the current research that should be considered when interpreting these findings. First, there is some understandable concern with the method by which the program was administered. Specifically, this VCD program was administered in university courses and required student participation for a specific portion of the grade in that class. Such an incentive structure could have influenced student motivation to participate in the program. In particular, the program largely requires students to embrace a learning mindset for the activities, being willing to sacrifice time and energy while completing additional requirements for other courses. Of course, the alternative (i.e., students self-selecting into the program) is also not ideal for inferring causality, but such a mindset was possibly stifled by the nature of the program being required for a small portion of the student's grades. This likely would have led students to be less inviting of the activities in the program, thereby mitigating the impact of the intervention overall.

Second, it is quite possible that there was treatment diffusion occurring throughout the implementation of the program. To elaborate, random assignment in this study was employed at the student level. This means that students on campus could have discussed and shared elements of the intervention in other domains of their social lives (e.g., other courses, dormitories, social venues, etc.). In such a context, it seems doubtful that students remained silent with each other throughout the program regarding their experiences and perceptions of the activities being completed. Furthermore, because students in all conditions had access to various career development resources available on and off campus, it's quite possible that students in the control or traditional VCD conditions compensated for not having spiritual discernment activities by utilizing said resources. These influences make it more difficult to distinguish between the

effect of the program on each of the three conditions, causing the observed effect to be smaller than it would be with greater control over the diffusion of the treatment.

A third limitation of this study is that perhaps student experiences of the vocational outcomes measured here require longer and in-person modes of VCD than a 10-week online program with minimal interaction. To elaborate, prior research and VCD theory suggest that the concepts of working alliance and an in-person method of implementing the program are best practices within VCD interventions (Whiston & James, 2013; Whiston & Rahardja, 2008). These aspects were not especially salient in the current program, and their use in future programs may be worthwhile for practitioners seeking to design spirituality-infused VCD interventions. With a less impactful intervention, the observed effect was likely an underrepresentation of the potential of spirituality-infused VCD.

Fourth, it may be the case that the age range of the students in the current study (sophomores in terms of academic standing) was not reflective of a population that was mature and ready for the career conversations that the program offered. This could have further weakened the strength of this study's program by virtue of it not being relevant or meaningful to the participants within the program. Fifth, the observed attrition and use of multiple imputation made some analyses for evaluating indirect effects no longer feasible (e.g. Hayes's [2018] PROCESS Macro is not compatible with imputed datasets). This required the use of alternative statistical approaches that are slightly more complex (e.g., partial posterior significance tests, hierarchical Bayesian confidence intervals), which may not have provided more conventional and easily understood estimates of program effectiveness, despite being the best options available.

One final limitation of the present research pertains to the content of the program in terms of the degree to which it comprehensively addresses the realities that students face when discerning careers in the current economic system. Of course, the program as a whole is designed to help students discern their career choices, which itself is a positive and other-oriented aim, especially when considering the costs and consequences of failing to discern one's identity (see the [introduction](#) for a discussion of these costs). Such work is sorely needed in higher education. That said, this focus on equipping students with tools for exploring career paths comes without much emphasis on the realities of an economic system that is largely stacked against these individuals; nor does it offer much in terms of guidance or resources for addressing or changing the injustices that may exist within this economic system. Future versions of the program may provide additional value from incorporating a consideration and discussion of these realities. For example, students may appreciate a deeper understanding of existing wage/promotion inequality, employment discrimination, issues of privilege and inequity in work, and the burden of student debt within the US economic system. This last point in particular is especially relevant given that students in the present climate of higher education face staunchly different economic burdens from those in past generations.

In particular, students in the 21<sup>st</sup> century are often discerning career paths while coping with tremendous amounts of student loan debt (Johnston & Roten, 2015). For example, an analysis of federal data from the Pew Research Center suggests that 53% of young adults (ages 18 to 29) with at least a bachelor's degree have outstanding debt from their education (Cilluffo, 2017). Another estimate from the Institute for College Access and Success (2014; using 2012 data from National Postsecondary Student Aid Study) holds that 75% of alumni from private universities or colleges had student loan debt in 2012, with an average debt of \$32,300. This

magnitude of debt influences the way students think about their careers paths, effectively narrowing the field of choices students may have (Minicozzi, 2005).

By providing students with tools for discerning career paths without addressing the realities of student loan debt and institutional injustices that exist, there is a risk that the program that will (a) insufficiently address the unique needs and experiences of its participants, and (b) be mistakenly interpreted as accepting or even giving tacit approval to these realities. For these reasons, much more work can be done both within this program and the VCD field at large to not only provide students with tools and resources for discerning career decisions, but also for building awareness and empowering change within the current economic system. Specifically, future iterations of this program might consider incorporating activities that build awareness of work-related injustice and student loan debt, as well as the implications of that debt on making career decisions, especially when one's perceived calling is not financially feasible.

Overall, these limitations are not ideal for interpreting the results of the present study. Nevertheless, with the exception of the final two limitations described, the prior four limitations would have likely mitigated the observed effect, not enhanced it. In other words, these limitations likely increased the chances of a type II error (i.e., a false negative), not a false positive; for that reason, they are likely not justifications for concluding that spirituality-infused VCD approaches are ineffective. Rather, they are cause for further study of the true effect of spirituality-infused VCD interventions on vocational outcomes.

### **Concluding Thoughts**

Results of the current study contribute to field of VCD research and practice by offering preliminary evidence about the impact of spirituality-infused VCD practices for fostering a sense of purpose, vocation, and calling for emerging adults in higher educations. In this study, I

employed a randomized clinical trial design with multiple experimental conditions to examine how VCD intervention characteristics influence vocational outcomes. Specifically, I assessed the role of spirituality-infused and traditional VCD interventions on purpose, vocation, and calling through the mediating mechanisms of self-concept clarity, career decision self-efficacy, and knowledge of occupational information. Findings from this research suggest that, when providing vocational care or counseling to emerging adults with hopes of fostering a sense of purpose, vocation, or calling, a holistic approach is recommended that incorporates spiritual exercises (e.g., discernment, meditation, prayer, reflection) and a goal of discerning vocational outcomes is recommended to have the greatest impact on one's sense of purpose, vocation, and calling in life.

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Appendix A: Figures

Figure 1

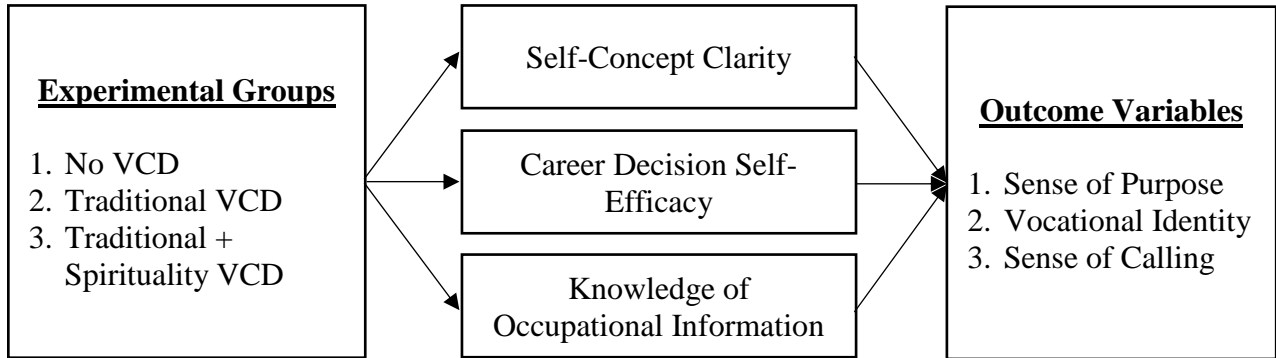


Figure 1. Comprehensive dissertation model.

Figure 2

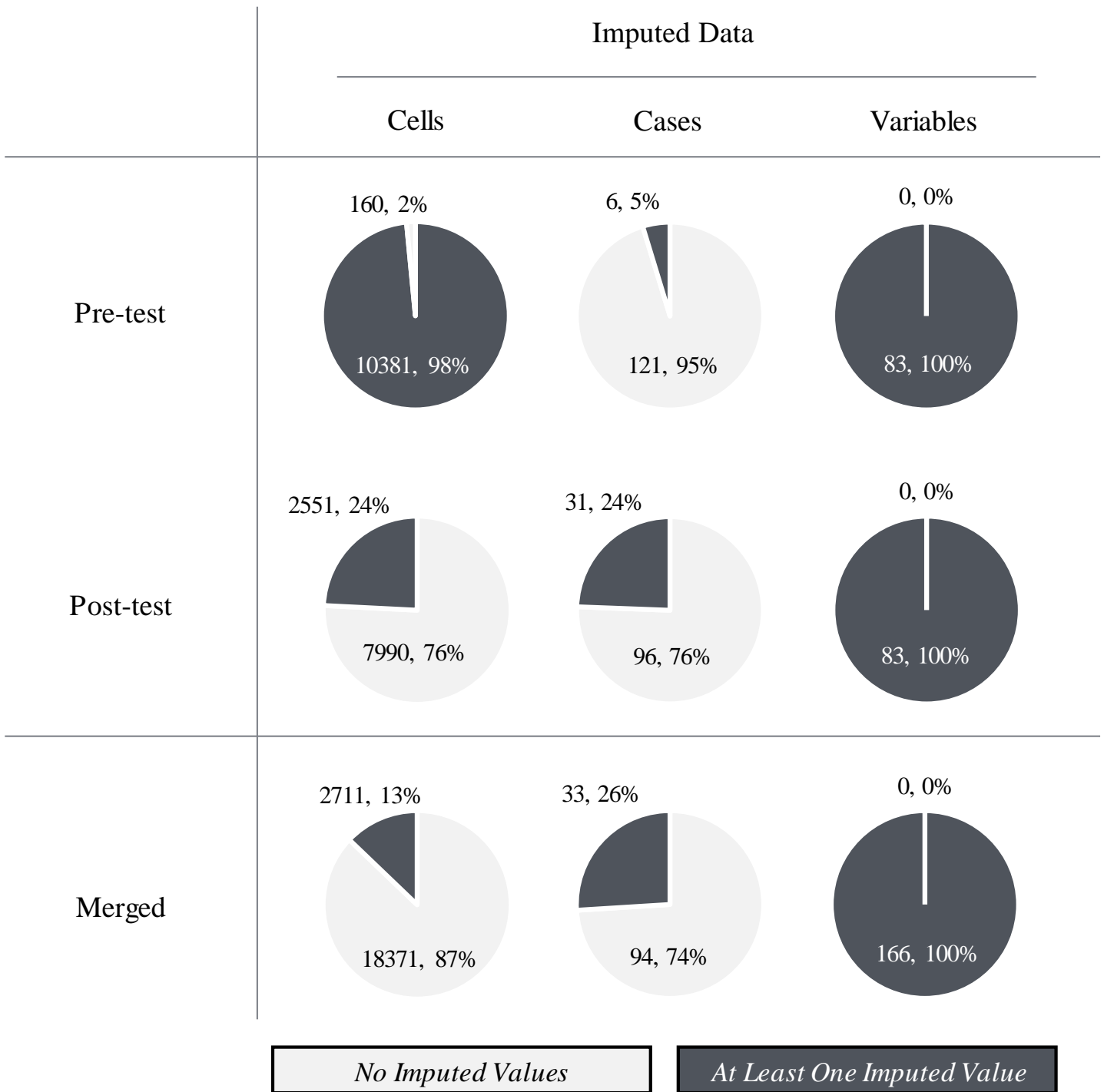


Figure 2. Number and percentage of imputed values at the cell, case, and variable level.



Figure 3

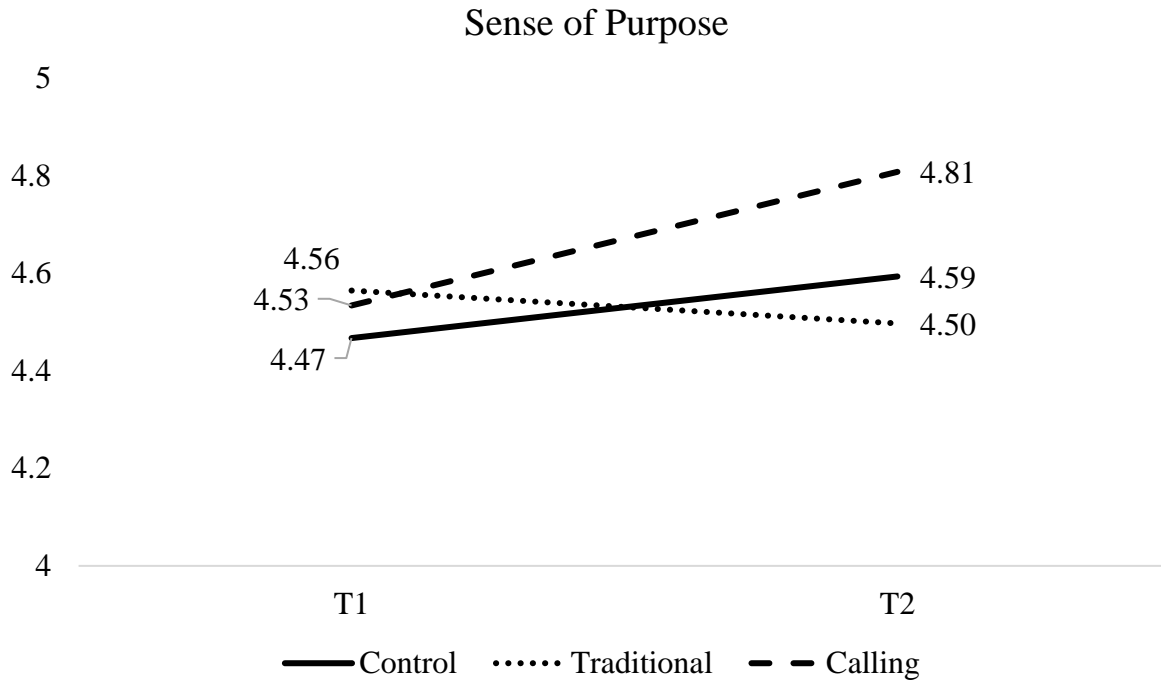


Figure 3. Change in sense of purpose over time by condition.

Figure 4

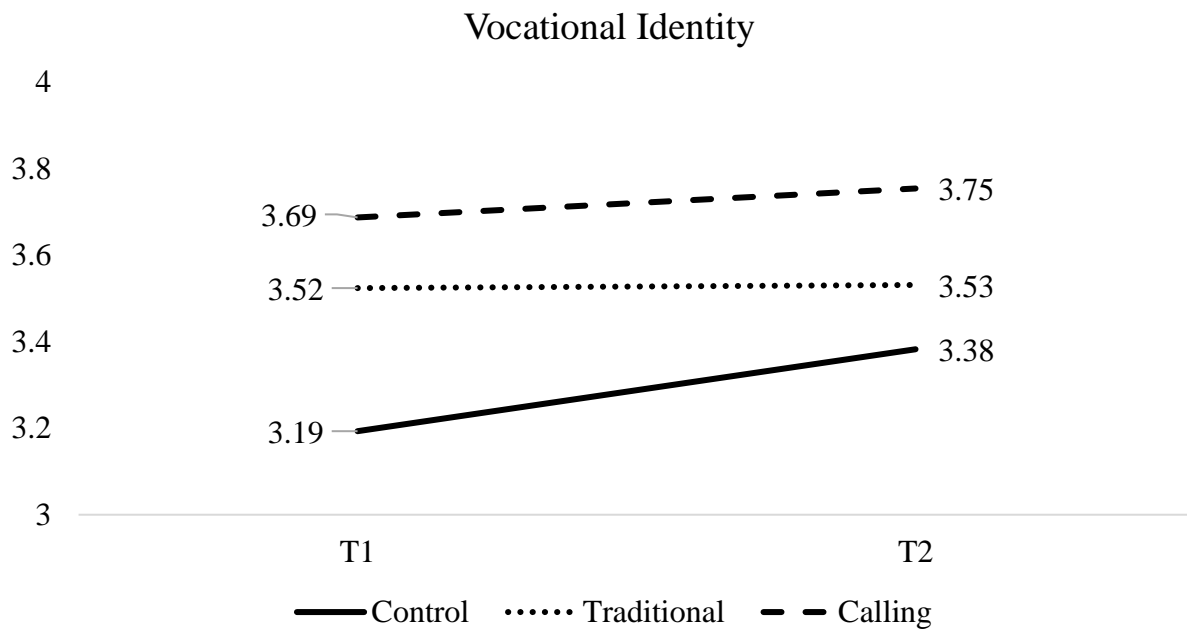


Figure 4. Change in vocational identity over time by condition.

Figure 5

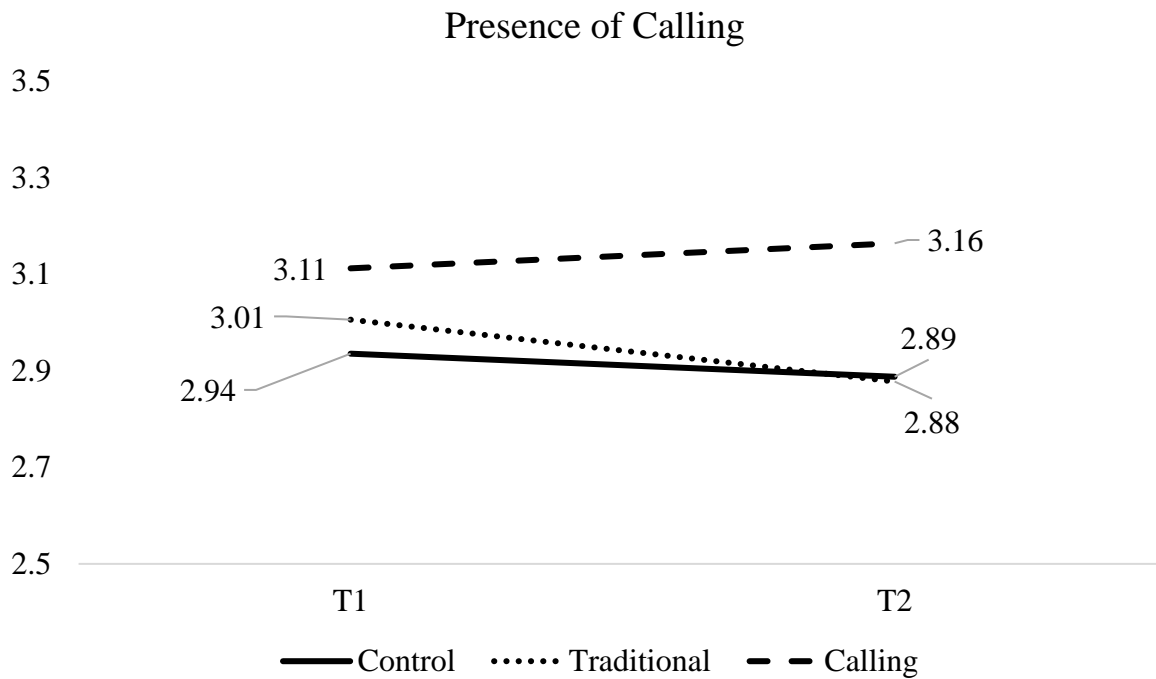


Figure 5. Change in presence of calling over time by condition.

Appendix B: Tables

Table 1  
*Characteristics of Emerging Adulthood Relevant to VCD Interventions*

Characteristic	Description
Identity Exploration	Emerging adults are in a state of exploring aspects of their identity, often through experimenting with new roles, experiences, and contexts.
Instability and Change	Emerging adults go through a stage of variability and change as they are willing to try new occupations, move to new locations, and engage in several short-term dating relationships.
Self-Focused but Not Selfish	The expanded freedom that emerging adults experience allows them to dedicate a substantial amount of time to self-development.
Feeling “In-Between”	Emerging adults do not experience the obligations and rules set for adolescents; yet, they do not experience the self-sufficiency and responsibility of adulthood.
Optimism about the Future	Emerging adults are highly optimistic about the future and its possibilities.
Intrinsic Work Values	Emerging adults are much more concerned with establishing intrinsic work values such as growth, autonomy, and fulfillment than they are with extrinsic work values such as title or pay.
Spirituality	Although emerging adults are less religious in terms of involvement with organized practice, they are not particularly opposed to spirituality, and some may even experience increases in spiritual practices.

Note. Characteristics, definitions, and implications are found in the work of Arnett (2000a, 2006), Jin and Rounds (2012), and Koenig (2015).

Table 2  
*Components of the Definitions of Vocational Outcomes Relevant to This Study*

	Sense of Significance	Stable/General Intention	Particular Life Role	Other-Oriented	Transcendent Summons
Meaning	✓				
Purpose	✓	✓			
Vocation	✓	✓	✓	✓	
Calling	✓	✓	✓	✓	✓

Note. Definitions are taken from Damon et al. (2003), Dik and Duffy (2009), and Steger et al. (2006).

Table 3  
*VCD Activities in the Present Study*

Activity	Relevant Best Practices	Brief Description
Daily <i>Examen</i> Prayer*	Written Exercises	Encourages reflection of emotions and thoughts from the prior day, in communication with the transcendent.
Professionalism	Modeling	Provides guidance on how to correspond professionally.
Informational Interviewing	Feedback; Occupational Information	Provides directions for how to set up and conduct informational interviews.
Job Shadowing	Modeling; Occupational Information	Encourages job shadowing and offers suggestions for how to find job shadowing opportunities.
Changing Majors	Support	Provides support for students considering changing majors.
Navigating Ambiguity	Support	Provides support and guidance for navigating feelings of confusion and being lost.
LinkedIn Use	Modeling	Offers statistics about the value of LinkedIn and guidance on creating a profile.
Discernment Individually*	Written Exercises	Provides guidance in reflecting on the many voices we listen to when discerning.
Discernment in Community*	Written Exercises	Provides guidance on discerning callings from the transcendent.
Discernment to Decision-Making*	Support; Written Exercises	Provides an engaging method of discerning important life decisions.
Retreat and Rest*	Support	Encourages students to find rest through fun and engaging ways (e.g., group retreats).
Advisor Meetings	Feedback; Support	Invites students to meet with their advisors and discuss their development and next steps.
Additional Reading	Occupational Information	Provides students with additional career discernment resources.

*Note.* Students had access to different activities based on which experimental group they were randomly assigned to. \* denotes an activity exclusively in the spirituality-infused condition.

Table 4  
*Coding Used for the Categorical Predictor in Multiple Regressions*

	X1	X2
<b>Dummy Coding</b>		
Control Group	1	0
Traditional VCD Intervention	0	1
Spirituality-Infused VCD Intervention	0	0
<b>Planed Contrast Coding</b>		
Control Group	-.5	-.5
Traditional VCD Intervention	-.5	.5
Spirituality-Infused VCD Intervention	1	0

Table 5  
Means, Standard Deviations, and Scale Correlations

Measure	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10	11	12	13
1. T1 Self-Concept Clarity	3.226	0.659	(.865)												
2. T1 Career Decision Self-Efficacy	3.609	0.633	0.426**	(.952)											
3. T1 Occupational Information	3.140	1.196	0.222*	0.402**	(.903)										
4. T1 Sense of Purpose	4.520	0.755	0.503**	0.475**	0.179*	(.781)									
5. T1 Vocational Identity	3.462	0.884	0.570**	0.708**	0.502**	0.495**	(.946)								
6. T1 Presence of Calling	3.015	0.647	0.246**	0.418**	0.005	0.410**	0.331**	(.901)							
7. T1 Strength of Faith	2.962	0.836	0.174	0.062	-0.062	0.191*	0.108	0.403**	(.931)						
8. T2 Self-Concept Clarity	3.356	0.663	0.614**	0.422**	0.197*	0.461**	0.556**	0.339**	0.192*	(.860)					
9. T2 Career Decision Self-Efficacy	3.763	0.605	0.394**	0.764**	0.388**	0.429**	0.659**	0.408**	0.022	0.584**	(.945)				
10. T2 Occupational Information	3.204	1.128	0.299**	0.476**	0.548**	0.255**	0.577**	0.256**	0.071	0.404**	0.600**	(.886)			
11. T2 Sense of Purpose	4.630	0.693	0.309**	0.422**	0.221*	0.541**	0.494**	0.392**	0.077	0.524**	0.570**	0.284**	(.741)		
12. T2 Vocational Identity	3.551	0.862	0.445**	0.548**	0.379**	0.430**	0.703**	0.412**	0.106	0.679**	0.734**	0.700**	0.598**	(.946)	
13. T2 Presence of Calling	2.973	0.548	0.264**	0.404**	0.152	0.427**	0.350**	0.691**	0.293**	0.296**	0.479**	0.259**	0.446**	0.423**	(.858)

Note. *N* = 127. Standard deviations and internal consistencies calculated as the average across imputed sets; correlations represent pooled estimates across imputed sets. \* *p* < .05 level (2-tailed). \*\* *p* < .01 level (2-tailed).

Table 6  
*Regression Results for Hypothesis 1*

Hypothesis 1a Outcome: Sense of Purpose							
<i>Predictor</i>	<i>B</i>	<i>B</i> 95% CI		$\beta$	<i>SE</i> $\beta$	<i>t</i> $\beta$	<i>p</i>
		Lower	Upper				
Constant	2.279	1.545	3.013	-0.014	0.130	-0.106	0.916
T1 Sense of Purpose	0.518	0.360	0.677	0.564	0.088	6.388	0.001**
Traditional VCD	-0.147	-0.406	0.112	-0.212	0.190	-1.113	0.266

Hypothesis 1b Outcome: Vocational Identity							
<i>Predictor</i>	<i>B</i>	<i>B</i> 95% CI		$\beta$	<i>SE</i> $\beta$	<i>t</i> $\beta$	<i>p</i>
		Lower	Upper				
Constant	1.186	0.685	1.688	0.018	0.101	0.181	0.856
T1 Vocational Identity	0.688	0.541	0.835	0.705	0.077	9.170	0.000**
Traditional VCD	-0.079	-0.326	0.168	-0.092	0.146	-0.626	0.531

Hypothesis 1c Outcome: Presence of Calling							
<i>Predictor</i>	<i>B</i>	<i>B</i> 95% CI		$\beta$	<i>SE</i> $\beta$	<i>t</i> $\beta$	<i>p</i>
		Lower	Upper				
Constant	1.115	0.710	1.511	-0.068	0.112	-0.612	0.541
T1 Presence of Calling	0.604	0.475	0.732	0.713	0.078	9.149	0.000**
Traditional VCD	-0.052	-0.226	0.121	-0.096	0.162	-0.592	0.554

*Note.* *N* = 86. *SE* $\beta$  = standard error of the standardized regression coefficient. Traditional VCD coded as 0 = control group, 1 = traditional VCD condition. \* *p* < .05 level (2-tailed). \*\* *p* < .01 level (2-tailed).

Table 7  
*Regression Results for Mediation: Traditional VCD → Self-Concept Clarity → Sense of Purpose*

<i>Mediator Model (DV = Self-Concept Clarity)</i>				
<i>Predictor</i>	<i>B</i>	<i>SE<sub>B</sub></i>	<i>t<sub>B</sub></i>	<i>p</i>
Constant	0.814	0.333	2.442	0.015*
Traditional VCD	0.010	0.116	0.085	0.933
T1 Self-Concept Clarity	0.490	0.106	4.261	0.000**
T1 Sense of Purpose	0.197	0.086	2.289	0.022*

<i>Outcome Model (DV = Sense of Purpose)</i>				
<i>Predictor</i>	<i>B</i>	<i>SE<sub>B</sub></i>	<i>t<sub>B</sub></i>	<i>p</i>
Constant	1.793	0.364	4.921	0.000**
Traditional VCD	-0.165	0.123	-1.335	0.182
T2 Self-Concept Clarity	0.510	0.127	4.028	0.000**
T1 Self-Concept Clarity	-0.170	0.139	-1.220	0.224
T1 Sense of Purpose	0.378	0.095	4.002	0.000**

	Indirect Effect	<i>p</i>	Hierarchical Bayes 95% CI	
			Lower	Upper
Partial Posterior Indirect Effect	.005	0.926	-0.119	0.131

*Note.* *N* = 86. *SE<sub>B</sub>* = standard error for the unstandardized regression coefficient. *CI* = confidence interval. Traditional VCD coded as 0 = control group, 1 = traditional VCD condition. \* *p* < .05 level (2-tailed). \*\* *p* < .01 level (2-tailed).



Table 8  
*Regression Results for Mediation: Traditional VCD → Career Decision Self-Efficacy → Sense of Purpose*

<i>Mediator Model (DV = Career Decision Self-Efficacy)</i>				
<i>Predictor</i>	<i>B</i>	<i>SE<sub>B</sub></i>	<i>t<sub>B</sub></i>	<i>p</i>
Constant	1.090	0.276	3.945	0.000**
Traditional VCD	0.020	0.085	0.232	0.817
T1 Career Decision Self-Efficacy	0.607	0.082	7.451	0.000
T1 Sense of Purpose	0.093	0.061	1.530	0.126

<i>Outcome Model (DV = Sense of Purpose)</i>				
<i>Predictor</i>	<i>B</i>	<i>SE<sub>B</sub></i>	<i>t<sub>B</sub></i>	<i>p</i>
Constant	1.205	0.411	2.934	0.003*
Traditional VCD	-0.190	0.119	-1.594	0.111
T2 Career Decision Self-Efficacy	0.654	0.165	3.956	0.000**
T1 Career Decision Self-Efficacy	-0.185	0.156	-1.187	0.236
T1 Sense of Purpose	0.373	0.086	4.344	0.000**

	<i>Indirect Effect</i>	<i>p</i>	<i>Hierarchical Bayes 95% CI</i>	
			<i>Lower</i>	<i>Upper</i>
Partial Posterior Indirect Effect	0.013	0.799	-0.102	0.133

*Note.* *N* = 86. *SE<sub>B</sub>* = standard error for the unstandardized regression coefficient. *CI* = confidence interval. Traditional VCD coded as 0 = control group, 1 = traditional VCD condition. \* *p* < .05 level (2-tailed). \*\* *p* < .01 level (2-tailed).

Table 9

*Regression Results for Mediation: Traditional VCD → Knowledge of Occupational Information → Sense of Purpose*

<i>Mediator Model (DV = Knowledge of Occupational Information)</i>				
<i>Predictor</i>	<i>B</i>	<i>SE<sub>B</sub></i>	<i>t<sub>B</sub></i>	<i>p</i>
Constant	0.717	0.573	1.252	0.211
Traditional VCD	0.105	0.197	0.532	0.595
T1 Knowledge of Occupational Info.	0.448	0.084	5.311	0.000**
T1 Sense of Purpose	0.225	0.122	1.850	0.064

<i>Outcome Model (DV = Sense of Purpose)</i>				
<i>Predictor</i>	<i>B</i>	<i>SE<sub>B</sub></i>	<i>t<sub>B</sub></i>	<i>p</i>
Constant	2.024	0.380	5.321	0.000
Traditional VCD	-0.154	0.129	-1.194	0.233
T2 Knowledge of Occupational Info.	0.124	0.079	1.570	0.117
T1 Knowledge of Occupational Info.	0.035	0.069	0.506	0.613
T1 Sense of Purpose	0.466	0.082	5.682	0.000**

	Indirect Effect	<i>p</i>	Hierarchical Bayes 95% CI	
			Lower	Upper
Partial Posterior Indirect Effect	0.013	0.530	-0.043	0.085

*Note.* *N* = 86. *SE<sub>B</sub>* = standard error for the unstandardized regression coefficient. *CI* = confidence interval. Traditional VCD coded as 0 = control group, 1 = traditional VCD condition. \* *p* < .05 level (2-tailed). \*\* *p* < .01 level (2-tailed).

Table 10  
*Regression Results for Mediation: Traditional VCD → Self-Concept Clarity → Vocational Identity*

<i>Mediator Model (DV = Self-Concept Clarity)</i>				
<i>Predictor</i>	<i>B</i>	<i>SE<sub>B</sub></i>	<i>t<sub>B</sub></i>	<i>p</i>
Constant	0.998	0.267	3.732	0.000**
Traditional VCD	-0.053	0.110	-0.483	0.629
T1 Self-Concept Clarity	0.399	0.105	3.793	0.000**
T1 Vocational Identity	0.305	0.084	3.620	0.000**

<i>Outcome Model (DV = Vocational Identity)</i>				
<i>Predictor</i>	<i>B</i>	<i>SE<sub>B</sub></i>	<i>t<sub>B</sub></i>	<i>p</i>
Constant	0.374	0.294	1.271	0.204
Traditional VCD	-0.054	0.113	-0.480	0.631
T2 Self-Concept Clarity	0.588	0.119	4.921	0.000**
T1 Self-Concept Clarity	-0.081	0.122	-0.666	0.506
T1 Vocational Identity	0.434	0.092	4.713	0.000**

	<i>Indirect Effect</i>	<i>p</i>	<i>Hierarchical Bayes 95% CI</i>	
			<i>Lower</i>	<i>Upper</i>
Partial Posterior Indirect Effect	-0.031	0.611	-0.17	0.101

*Note.*  $N = 86$ .  $SE_B$  = standard error for the unstandardized regression coefficient.  $CI$  = confidence interval. Traditional VCD coded as 0 = control group, 1 = traditional VCD condition. \*  $p < .05$  level (2-tailed). \*\*  $p < .01$  level (2-tailed).

Table 11  
*Regression Results for Mediation: Traditional VCD → Career Decision Self-Efficacy → Vocational Identity*

<i>Mediator Model (DV = Career Decision Self-Efficacy)</i>				
<i>Predictor</i>	<i>B</i>	<i>SE<sub>B</sub></i>	<i>t<sub>B</sub></i>	<i>p</i>
Constant	1.262	0.241	5.238	0.000**
Traditional VCD	-0.011	0.084	-0.133	0.894
T1 Career Decision Self-Efficacy	0.523	0.091	5.779	0.000**
T1 Vocational Identity	0.168	0.067	2.499	0.012*

<i>Outcome Model (DV = Vocational Identity)</i>				
<i>Predictor</i>	<i>B</i>	<i>SE<sub>B</sub></i>	<i>t<sub>B</sub></i>	<i>p</i>
Constant	-0.211	0.344	-0.615	0.539
Traditional VCD	-0.073	0.106	-0.694	0.488
T2 Career Decision Self-Efficacy	0.856	0.151	5.653	0.000**
T1 Career Decision Self-Efficacy	-0.283	0.144	-1.960	0.051
T1 Vocational Identity	0.464	0.086	5.389	0.000**

	<i>Indirect Effect</i>	<i>p</i>	<i>Hierarchical Bayes 95% CI</i>	
			<i>Lower</i>	<i>Upper</i>
Partial Posterior Indirect Effect	-0.009	0.891	-0.158	0.137

*Note.* *N* = 86. *SE<sub>B</sub>* = standard error for the unstandardized regression coefficient. *CI* = confidence interval. Traditional VCD coded as 0 = control group, 1 = traditional VCD condition. \* *p* < .05 level (2-tailed). \*\* *p* < .01 level (2-tailed).

Table 12

*Regression Results for Mediation: Traditional VCD → Knowledge of Occupational Information → Vocational Identity*

<i>Mediator Model (DV = Knowledge of Occupational Information)</i>				
<i>Predictor</i>	<i>B</i>	<i>SE<sub>B</sub></i>	<i>t<sub>B</sub></i>	<i>p</i>
Constant	0.873	0.399	2.186	0.029
Traditional VCD	0.000	0.197	-0.002	0.999
T1 Knowledge of Occupational Info.	0.336	0.098	3.437	0.001
T1 Vocational Identity	0.373	0.140	2.658	0.008

<i>Outcome Model (DV = Vocational Identity)</i>				
<i>Predictor</i>	<i>B</i>	<i>SE<sub>B</sub></i>	<i>t<sub>B</sub></i>	<i>p</i>
Constant	0.821	0.205	4.004	0.000*
Traditional VCD	-0.091	0.100	-0.911	0.362
T2 Knowledge of Occupational Info.	0.437	0.061	7.100	0.000**
T1 Knowledge of Occupational Info.	-0.186	0.056	-3.312	0.001*
T1 Vocational Identity	0.558	0.074	7.491	0.000**

	Indirect Effect	<i>p</i>	Hierarchical Bayes 95% CI	
			Lower	Upper
Partial Posterior Indirect Effect	0.000	0.998	-0.75	0.174

*Note.* *N* = 86. *SE<sub>B</sub>* = standard error for the unstandardized regression coefficient. *CI* = confidence interval. Traditional VCD coded as 0 = control group, 1 = traditional VCD condition. \* *p* < .05 level (2-tailed). \*\* *p* < .01 level (2-tailed).

Table 13  
 Regression Results for Mediation: Traditional VCD → Self-Concept Clarity → Presence of Calling

<i>Mediator Model (DV = Self-Concept Clarity)</i>				
<i>Predictor</i>	<i>B</i>	<i>SE<sub>B</sub></i>	<i>t<sub>B</sub></i>	<i>p</i>
Constant	0.742	0.313	2.369	0.018*
Traditional VCD	-0.002	0.113	-0.014	0.989
T1 Self-Concept Clarity	0.549	0.088	6.237	0.000**
T1 Presence of Calling	0.264	0.087	3.018	0.003*

<i>Outcome Model (DV = Presence of Calling)</i>				
<i>Predictor</i>	<i>B</i>	<i>SE<sub>B</sub></i>	<i>t<sub>B</sub></i>	<i>p</i>
Constant	0.964	0.260	3.712	0.000**
Traditional VCD	-0.064	0.090	-0.718	0.473
T2 Self-Concept Clarity	0.012	0.094	0.125	0.900
T1 Self-Concept Clarity	0.060	0.093	0.645	0.519
T1 Presence of Calling	0.581	0.074	7.889	0.000**

	Indirect Effect	<i>p</i>	Hierarchical Bayes 95% CI	
			Lower	Upper
Partial Posterior Indirect Effect	-0.000	0.995	-0.024	0.024

*Note.* *N* = 86. *SE<sub>B</sub>* = standard error for the unstandardized regression coefficient. *CI* = confidence interval. Traditional VCD coded as 0 = control group, 1 = traditional VCD condition. \* *p* < .05 level (2-tailed). \*\* *p* < .01 level (2-tailed).

Table 14  
*Regression Results for Mediation: Traditional VCD → Career Decision Self-Efficacy → Presence of Calling*

<i>Mediator Model (DV = Career Decision Self-Efficacy)</i>				
<i>Predictor</i>	<i>B</i>	<i>SE<sub>B</sub></i>	<i>t<sub>B</sub></i>	<i>p</i>
Constant	1.220	0.268	4.557	0.000**
Traditional VCD	0.018	0.086	0.207	0.836
T1 Career Decision Self-Efficacy	0.648	0.077	8.423	0.000**
T1 Presence of Calling	0.050	0.071	0.699	0.485

<i>Outcome Model (DV = Presence of Calling)</i>				
<i>Predictor</i>	<i>B</i>	<i>SE<sub>B</sub></i>	<i>t<sub>B</sub></i>	<i>p</i>
Constant	0.671	0.297	2.256	0.024*
Traditional VCD	-0.068	0.088	-0.779	0.436
T2 Career Decision Self-Efficacy	0.217	0.115	1.881	0.060
T1 Career Decision Self-Efficacy	-0.063	0.109	-0.581	0.562
T1 Presence of Calling	0.563	0.071	7.907	0.000**

	<i>Indirect Effect</i>	<i>p</i>	<i>Hierarchical Bayes 95% CI</i>	
			<i>Lower</i>	<i>Upper</i>
Partial Posterior Indirect Effect	0.004	0.781	-0.04	0.051

*Note.* *N* = 86. *SE<sub>B</sub>* = standard error for the unstandardized regression coefficient. *CI* = confidence interval. Traditional VCD coded as 0 = control group, 1 = traditional VCD condition. \* *p* < .05 level (2-tailed). \*\* *p* < .01 level (2-tailed).

Table 15

*Regression Results for Mediation: Traditional VCD → Knowledge of Occupational Information → Presence of Calling*

<i>Mediator Model (DV = Knowledge of Occupational Information)</i>				
<i>Predictor</i>	<i>B</i>	<i>SE<sub>B</sub></i>	<i>t<sub>B</sub></i>	<i>p</i>
Constant	0.262	0.489	0.536	0.592
Traditional VCD	0.095	0.189	0.501	0.616
T1 Knowledge of Occupational Info.	0.472	0.080	5.921	0.000**
T1 Presence of Calling	0.472	0.140	3.369	0.001*

<i>Outcome Model (DV = Presence of Calling)</i>				
<i>Predictor</i>	<i>B</i>	<i>SE<sub>B</sub></i>	<i>t<sub>B</sub></i>	<i>p</i>
Constant	1.018	0.229	4.445	0.000**
Traditional VCD	-0.050	0.090	-0.557	0.578
T2 Knowledge of Occupational Info.	-0.010	0.056	-0.172	0.863
T1 Knowledge of Occupational Info.	0.037	0.046	0.800	0.424
T1 Presence of Calling	0.608	0.071	8.582	0.000**

	<i>Indirect Effect</i>	<i>p</i>	<i>Hierarchical Bayes 95% CI</i>	
			<i>Lower</i>	<i>Upper</i>
Partial Posterior Indirect Effect	-0.001	0.880	-0.029	0.024

*Note.*  $N = 86$ .  $SE_B$  = standard error for the unstandardized regression coefficient.  $CI$  = confidence interval. Traditional VCD coded as 0 = control group, 1 = traditional VCD condition. \*  $p < .05$  level (2-tailed). \*\*  $p < .01$  level (2-tailed).



Table 16  
*Regression Results for Hypothesis 5*

Hypothesis 5a Outcome: Sense of Purpose							
<i>Predictor</i>	<i>B</i>	<i>B</i> 95% CI		$\beta$	<i>SE</i> $\beta$	<i>t</i> $\beta$	<i>p</i>
		Lower	Upper				
Constant	2.547	1.897	3.197	0.246	0.134	1.842	0.066
T1 Sense of Purpose	0.499	0.362	0.635	0.543	0.076	7.156	0.000**
Spirituality vs. Control	-0.181	-0.436	0.073	-0.261	0.187	-1.395	0.163
Spirituality vs. Traditional	-0.326	-0.586	-0.066	-0.470	0.191	-2.455	0.014*

Hypothesis 5b Outcome: Vocational Identity							
<i>Predictor</i>	<i>B</i>	<i>B</i> 95% CI		$\beta$	<i>SE</i> $\beta$	<i>t</i> $\beta$	<i>p</i>
		Lower	Upper				
Constant	1.229	0.724	1.735	0.056	0.115	0.488	0.625
T1 Vocational Identity	0.685	0.558	0.811	0.702	0.066	10.586	0.000**
Spirituality vs. Control	-0.033	-0.306	0.240	-0.039	0.161	-0.239	0.811
Spirituality vs. Traditional	-0.111	-0.386	0.164	-0.129	0.163	-0.793	0.428

Hypothesis 5c Outcome: Presence of Calling							
<i>Predictor</i>	<i>B</i>	<i>B</i> 95% CI		$\beta$	<i>SE</i> $\beta$	<i>t</i> $\beta$	<i>p</i>
		Lower	Upper				
Constant	1.388	1.013	1.763	0.247	0.117	2.107	0.035
T1 Presence of Calling	0.571	0.460	0.682	0.674	0.067	10.012	0.000**
Spirituality vs. Control	-0.176	-0.353	0.002	-0.320	0.165	-1.942	0.053
Spirituality vs. Traditional	-0.226	-0.407	-0.045	-0.412	0.168	-2.449	0.015*

*Note.* *N* = 127. *SE* $\beta$  = standard error of the standardized regression coefficient. Spirituality vs. Control coded as 0 = spirituality-infused VCD group, 1 = control group. Spirituality vs. Traditional coded as 0 = spirituality-infused VCD group, 1 = traditional VCD group. \* *p* < .05 level (2-tailed). \*\* *p* < .01 level (2-tailed).

Table 17  
*Regression Results for Mediation: Spiritual VCD → Self-Concept Clarity → Sense of Purpose*

<i>Mediator Model (DV = Self-Concept Clarity)</i>				
<i>Predictor</i>	<i>B</i>	<i>SE<sub>B</sub></i>	<i>t<sub>B</sub></i>	<i>p</i>
Constant	1.083	0.319	3.397	0.001**
Spirituality vs. Control	-0.213	0.116	-1.832	0.067
Spirituality vs. Traditional	-0.200	0.118	-1.702	0.089
T1 Self-Concept Clarity	0.476	0.088	5.439	0.000**
T1 Sense of Purpose	0.194	0.073	2.659	0.008**

<i>Outcome Model (DV = Sense of Purpose)</i>				
<i>Predictor</i>	<i>B</i>	<i>SE<sub>B</sub></i>	<i>t<sub>B</sub></i>	<i>p</i>
Constant	2.054	0.352	5.835	0.000**
Spirituality vs. Control	-0.083	0.127	-0.651	0.515
Spirituality vs. Traditional	-0.237	0.129	-1.832	0.067
T2 Self-Concept Clarity	0.427	0.101	4.211	0.000**
T1 Self-Concept Clarity	-0.183	0.109	-1.678	0.094
T1 Sense of Purpose	0.407	0.078	5.199	0.000**

<i>Partial Posterior Indirect Effect</i>	Indirect Effect	<i>p</i>	Hierarchical Bayes 90% CI	
			Lower	Upper
Spirituality vs. Control	-0.091	0.053	-0.189	-0.008
Spirituality vs. Traditional	-0.085	0.072	-0.184	-0.002

*Note.*  $N = 127$ .  $SE_{\beta}$  = standard error of the standardized regression coefficient. Spirituality vs. Control coded as 0 = spirituality-infused VCD group, 1 = control group. Spirituality vs. Traditional coded as 0 = spirituality-infused VCD group, 1 = traditional VCD group. \*  $p < .05$  level (2-tailed). \*\*  $p < .01$  level (2-tailed).

Table 18

Regression Results for Mediation: Spiritual VCD → Career Decision Self-Efficacy → Sense of Purpose

<i>Mediator Model (DV = Career Decision Self-Efficacy)</i>				
<i>Predictor</i>	<i>B</i>	<i>SE<sub>B</sub></i>	<i>t<sub>B</sub></i>	<i>p</i>
Constant	1.095	0.255	4.299	0.000**
Spirituality vs. Control	-0.146	0.088	-1.659	0.097
Spirituality vs. Traditional	-0.136	0.089	-1.530	0.126
T1 Career Decision Self-Efficacy	0.672	0.064	10.422	0.000**
T1 Sense of Purpose	0.075	0.053	1.408	0.159

<i>Outcome Model (DV = Sense of Purpose)</i>				
<i>Predictor</i>	<i>B</i>	<i>SE<sub>B</sub></i>	<i>t<sub>B</sub></i>	<i>p</i>
Constant	1.472	0.368	4.003	0.000**
Spirituality vs. Control	-0.041	0.121	-0.336	0.737
Spirituality vs. Traditional	-0.223	0.121	-1.847	0.065
T2 Career Decision Self-Efficacy	0.585	0.133	4.397	0.000**
T1 Career Decision Self-Efficacy	-0.172	0.131	-1.315	0.189
T1 Sense of Purpose	0.368	0.072	5.085	0.000**

<i>Partial Posterior Indirect Effect</i>	Indirect Effect	<i>p</i>	Hierarchical Bayes 90% CI	
			Lower	Upper
Spirituality vs. Control	-0.085	0.080	-0.185	-0.001
Spirituality vs. Traditional	0.000	0.105	-0.202	0.023

Note. *N* = 127. *SE<sub>β</sub>* = standard error of the standardized regression coefficient. Spirituality vs. Control coded as 0 = spirituality-infused VCD group, 1 = control group. Spirituality vs. Traditional coded as 0 = spirituality-infused VCD group, 1 = traditional VCD group. \* *p* < .05 level (2-tailed). \*\* *p* < .01 level (2-tailed).

Table 19

*Regression Results for Mediation: Spiritual VCD → Knowledge of Occupational Information → Sense of Purpose*

<i>Mediator Model (DV = Knowledge of Occupational Information)</i>				
<i>Predictor</i>	<i>B</i>	<i>SE<sub>B</sub></i>	<i>t<sub>B</sub></i>	<i>p</i>
Constant	0.604	0.571	1.057	0.291
Spirituality vs. Control	-0.071	0.212	-0.335	0.738
Spirituality vs. Traditional	0.034	0.219	0.155	0.877
T1 Knowledge of Occupational Info.	0.488	0.079	6.198	0.000**
T1 Sense of Purpose	0.239	0.118	2.031	0.042*

<i>Outcome Model (DV = Sense of Purpose)</i>				
<i>Predictor</i>	<i>B</i>	<i>SE<sub>B</sub></i>	<i>t<sub>B</sub></i>	<i>p</i>
Constant	2.373	0.345	6.884	0.000**
Spirituality vs. Control	-0.156	0.130	-1.205	0.228
Spirituality vs. Traditional	-0.306	0.134	-2.284	0.023*
T2 Knowledge of Occupational Info.	0.077	0.060	1.283	0.200
T1 Knowledge of Occupational Info.	0.022	0.059	0.378	0.705
T1 Sense of Purpose	0.464	0.072	6.462	0.000**

<i>Partial Posterior Indirect Effect</i>	Indirect Effect	<i>p</i>	Hierarchical Bayes 95% CI	
			Lower	Upper
Spirituality vs. Control	-0.005	0.681	-0.055	0.036
Spirituality vs. Traditional	0.000	0.831	-0.042	0.052

*Note.*  $N = 127$ .  $SE_{\beta}$  = standard error of the standardized regression coefficient. Spirituality vs. Control coded as 0 = spirituality-infused VCD group, 1 = control group. Spirituality vs. Traditional coded as 0 = spirituality-infused VCD group, 1 = traditional VCD group. \*  $p < .05$  level (2-tailed). \*\*  $p < .01$  level (2-tailed).

Table 20

*Regression Results for Mediation: Spiritual VCD → Self-Concept Clarity → Vocational Identity*

<i>Mediator Model (DV = Self-Concept Clarity)</i>				
<i>Predictor</i>	<i>B</i>	<i>SE<sub>B</sub></i>	<i>t<sub>B</sub></i>	<i>p</i>
Constant	1.302	0.268	4.852	0.000**
Spirituality vs. Control	-0.133	0.114	-1.168	0.243
Spirituality vs. Traditional	-0.165	0.116	-1.429	0.153
T1 Self-Concept Clarity	0.429	0.088	4.851	0.000**
T1 Vocational Identity	0.222	0.064	3.450	0.001**

<i>Outcome Model (DV = Vocational Identity)</i>				
<i>Predictor</i>	<i>B</i>	<i>SE<sub>B</sub></i>	<i>t<sub>B</sub></i>	<i>p</i>
Constant	0.255	0.312	0.817	0.414
Spirituality vs. Control	0.064	0.123	0.521	0.603
Spirituality vs. Traditional	0.001	0.128	0.009	0.993
T2 Self-Concept Clarity	0.629	0.102	6.174	0.000**
T1 Self-Concept Clarity	-0.189	0.107	-1.774	0.076
T1 Vocational Identity	0.512	0.071	7.172	0.000**

<i>Partial Posterior Indirect Effect</i>	Indirect Effect	<i>p</i>	Hierarchical Bayes 95% CI	
			Lower	Upper
Spirituality vs. Control	-0.084	0.230	-0.237	0.058
Spirituality vs. Traditional	0.000	0.141	-0.262	0.040

*Note.*  $N = 127$ .  $SE_{\beta}$  = standard error of the standardized regression coefficient. Spirituality vs. Control coded as 0 = spirituality-infused VCD group, 1 = control group. Spirituality vs. Traditional coded as 0 = spirituality-infused VCD group, 1 = traditional VCD group. \*  $p < .05$  level (2-tailed). \*\*  $p < .01$  level (2-tailed).

Table 21

*Regression Results for Mediation: Spiritual VCD → Career Decision Self-Efficacy → Vocational Identity*

<i>Mediator Model (DV = Career Decision Self-Efficacy)</i>				
<i>Predictor</i>	<i>B</i>	<i>SE<sub>B</sub></i>	<i>t<sub>B</sub></i>	<i>p</i>
Constant	1.258	0.216	5.824	0.000**
Spirituality vs. Control	-0.103	0.087	-1.192	0.233
Spirituality vs. Traditional	-0.118	0.087	-1.357	0.175
T1 Career Decision Self-Efficacy	0.567	0.077	7.333	0.000**
T1 Vocational Identity	0.154	0.056	2.738	0.006**

<i>Outcome Model (DV = Vocational Identity)</i>				
<i>Predictor</i>	<i>B</i>	<i>SE<sub>B</sub></i>	<i>t<sub>B</sub></i>	<i>p</i>
Constant	-0.141	0.334	-0.421	0.674
Spirituality vs. Control	0.062	0.120	0.514	0.607
Spirituality vs. Traditional	-0.005	0.122	-0.044	0.965
T2 Career Decision Self-Efficacy	0.884	0.133	6.665	0.000**
T1 Career Decision Self-Efficacy	-0.365	0.137	-2.661	0.008**
T1 Vocational Identity	0.479	0.080	6.023	0.000**

<i>Partial Posterior Indirect Effect</i>	<i>Indirect Effect</i>	<i>p</i>	<i>Hierarchical Bayes 95% CI</i>	
			<i>Lower</i>	<i>Upper</i>
Spirituality vs. Control	-0.091	0.222	-0.251	0.061
Spirituality vs. Traditional	0.000	0.165	-0.266	0.048

*Note.*  $N = 127$ .  $SE_{\beta}$  = standard error of the standardized regression coefficient. Spirituality vs. Control coded as 0 = spirituality-infused VCD group, 1 = control group. Spirituality vs. Traditional coded as 0 = spirituality-infused VCD group, 1 = traditional VCD group. \*  $p < .05$  level (2-tailed). \*\*  $p < .01$  level (2-tailed).

Table 22

*Regression Results for Mediation: Spiritual VCD → Knowledge of Occupational Information → Vocational Identity*

<i>Mediator Model (DV = Knowledge of Occupational Information)</i>				
<i>Predictor</i>	<i>B</i>	<i>SE<sub>B</sub></i>	<i>t<sub>B</sub></i>	<i>p</i>
Constant	0.298	0.386	0.772	0.440
Spirituality vs. Control	0.117	0.200	0.583	0.560
Spirituality vs. Traditional	0.065	0.205	0.318	0.751
T1 Knowledge of Occupational Info.	0.325	0.084	3.865	0.000**
T1 Vocational Identity	0.526	0.110	4.767	0.000**

<i>Outcome Model (DV = Vocational Identity)</i>				
<i>Predictor</i>	<i>B</i>	<i>SE<sub>B</sub></i>	<i>t<sub>B</sub></i>	<i>p</i>
Constant	1.099	0.225	4.887	0.000**
Spirituality vs. Control	-0.078	0.120	-0.649	0.516
Spirituality vs. Traditional	-0.131	0.122	-1.071	0.284
T2 Knowledge of Occupational Info.	0.380	0.059	6.501	0.000**
T1 Knowledge of Occupational Info.	-0.105	0.053	-1.961	0.050
T1 Vocational Identity	0.471	0.070	6.692	0.000**

<i>Partial Posterior Indirect Effect</i>	Indirect Effect	<i>p</i>	Hierarchical Bayes 95% CI	
			Lower	Upper
Spirituality vs. Control	0.044	0.550	-0.107	0.202
Spirituality vs. Traditional	0.000	0.745	-0.132	0.184

*Note.*  $N = 127$ .  $SE_{\beta}$  = standard error of the standardized regression coefficient. Spirituality vs. Control coded as 0 = spirituality-infused VCD group, 1 = control group. Spirituality vs. Traditional coded as 0 = spirituality-infused VCD group, 1 = traditional VCD group. \*  $p < .05$  level (2-tailed). \*\*  $p < .01$  level (2-tailed).

Table 23

Regression Results for Mediation: Spiritual VCD → Self-Concept Clarity → Presence of Calling

<i>Mediator Model (DV = Self-Concept Clarity)</i>				
<i>Predictor</i>	<i>B</i>	<i>SE<sub>B</sub></i>	<i>t<sub>B</sub></i>	<i>p</i>
Constant	1.105	0.317	3.490	0.000**
Spirituality vs. Control	-0.165	0.116	-1.420	0.156
Spirituality vs. Traditional	-0.161	0.118	-1.365	0.172
T1 Self-Concept Clarity	0.547	0.077	7.120	0.000**
T1 Presence of Calling	0.198	0.075	2.629	0.009**

<i>Outcome Model (DV = Presence of Calling)</i>				
<i>Predictor</i>	<i>B</i>	<i>SE<sub>B</sub></i>	<i>t<sub>B</sub></i>	<i>p</i>
Constant	1.225	0.256	4.791	0.000**
Spirituality vs. Control	-0.156	0.093	-1.682	0.093
Spirituality vs. Traditional	-0.219	0.094	-2.331	0.020*
T2 Self-Concept Clarity	-0.013	0.073	-0.173	0.863
T1 Self-Concept Clarity	0.072	0.073	0.984	0.325
T1 Presence of Calling	0.559	0.060	9.344	0.000**

<i>Partial Posterior Indirect Effect</i>	Indirect Effect	<i>p</i>	Hierarchical Bayes 95% CI	
			Lower	Upper
Spirituality vs. Control	0.002	0.812	-0.028	0.036
Spirituality vs. Traditional	0.000	0.813	-0.028	0.035

Note. *N* = 127. *SE<sub>β</sub>* = standard error of the standardized regression coefficient. Spirituality vs. Control coded as 0 = spirituality-infused VCD group, 1 = control group. Spirituality vs. Traditional coded as 0 = spirituality-infused VCD group, 1 = traditional VCD group. \* *p* < .05 level (2-tailed). \*\* *p* < .01 level (2-tailed).



Table 24

Regression Results for Mediation: *Spiritual VCD* → *Career Decision Self-Efficacy* → *Presence of Calling*

<i>Mediator Model (DV = Career Decision Self-Efficacy)</i>				
<i>Predictor</i>	<i>B</i>	<i>SE<sub>B</sub></i>	<i>t<sub>B</sub></i>	<i>p</i>
Constant	1.126	0.239	4.707	0.000**
Spirituality vs. Control	-0.133	0.087	-1.520	0.129
Spirituality vs. Traditional	-0.123	0.089	-1.387	0.165
T1 Career Decision Self-Efficacy	0.675	0.062	10.929	0.000**
T1 Presence of Calling	0.096	0.060	1.592	0.111

<i>Outcome Model (DV = Presence of Calling)</i>				
<i>Predictor</i>	<i>B</i>	<i>SE<sub>B</sub></i>	<i>t<sub>B</sub></i>	<i>p</i>
Constant	0.856	0.258	3.323	0.001**
Spirituality vs. Control	-0.123	0.090	-1.358	0.175
Spirituality vs. Traditional	-0.192	0.091	-2.102	0.036*
T2 Career Decision Self-Efficacy	0.228	0.092	2.480	0.013
T1 Career Decision Self-Efficacy	-0.044	0.087	-0.504	0.614
T1 Presence of Calling	0.506	0.061	8.289	0.000**

<i>Partial Posterior Indirect Effect</i>	Indirect Effect	<i>p</i>	Hierarchical Bayes 95% CI	
			Lower	Upper
Spirituality vs. Control	-0.030	0.106	-0.088	0.009
Spirituality vs. Traditional	0.000	0.135	-0.086	0.012

Note. *N* = 127. *SE<sub>β</sub>* = standard error of the standardized regression coefficient. Spirituality vs. Control coded as 0 = spirituality-infused VCD group, 1 = control group. Spirituality vs. Traditional coded as 0 = spirituality-infused VCD group, 1 = traditional VCD group. \* *p* < .05 level (2-tailed). \*\* *p* < .01 level (2-tailed).

Table 25

*Regression Results for Mediation: Spiritual VCD → Knowledge of Occupational Information → Presence of Calling*

<i>Mediator Model (DV = Knowledge of Occupational Information)</i>				
<i>Predictor</i>	<i>B</i>	<i>SE<sub>B</sub></i>	<i>t<sub>B</sub></i>	<i>p</i>
Constant	0.212	0.503	0.421	0.674
Spirituality vs. Control	0.002	0.208	0.007	0.994
Spirituality vs. Traditional	0.100	0.215	0.464	0.642
T1 Knowledge of Occupational Info.	0.518	0.076	6.856	0.000**
T1 Presence of Calling	0.442	0.129	3.422	0.001**

<i>Outcome Model (DV = Presence of Calling)</i>				
<i>Predictor</i>	<i>B</i>	<i>SE<sub>B</sub></i>	<i>t<sub>B</sub></i>	<i>p</i>
Constant	1.187	0.213	5.581	0.000**
Spirituality vs. Control	-0.155	0.090	-1.725	0.085
Spirituality vs. Traditional	-0.204	0.092	-2.210	0.027*
T2 Knowledge of Occupational Info.	0.005	0.041	0.111	0.911
T1 Knowledge of Occupational Info.	0.055	0.038	1.464	0.144
T1 Presence of Calling	0.570	0.059	9.696	0.000**

<i>Partial Posterior Indirect Effect</i>	Indirect Effect	<i>p</i>	Hierarchical Bayes 95% CI	
			Lower	Upper
Spirituality vs. Control	0.000	0.998	-0.019	0.019
Spirituality vs. Traditional	0.000	0.920	-0.020	0.023

*Note.* *N* = 127. *SE<sub>β</sub>* = standard error of the standardized regression coefficient. Spirituality vs. Control coded as 0 = spirituality-infused VCD group, 1 = control group. Spirituality vs. Traditional coded as 0 = spirituality-infused VCD group, 1 = traditional VCD group. \* *p* < .05 level (2-tailed). \*\* *p* < .01 level (2-tailed).

Table 26

*Regression Results for Hypothesis 1 Interaction with Strength of Faith*

Hypothesis 1a Outcome: Sense of Purpose							
<i>Predictor</i>	<i>B</i>	<i>B 95% CI</i>		$\beta$	<i>SE<sub>β</sub></i>	<i>t<sub>β</sub></i>	<i>p</i>
		Lower	Upper				
Constant	1.885	0.911	2.859	-0.004	0.130	-0.030	0.976
T1 Sense of Purpose	0.540	0.379	0.701	0.588	0.090	6.562	0.000**
T1 Strength of Faith	0.102	-0.127	0.331	-0.230	0.141	0.872	0.383
Traditional VCD	0.581	-0.316	1.478	0.123	0.189	-1.217	0.204
Interaction Term	-0.250	-0.547	0.047	-0.302	0.183	-1.651	0.099

Hypothesis 1b Outcome: Vocational Identity							
<i>Predictor</i>	<i>B</i>	<i>B 95% CI</i>		$\beta$	<i>SE<sub>β</sub></i>	<i>t<sub>β</sub></i>	<i>p</i>
		Lower	Upper				
Constant	0.855	0.079	1.631	0.024	0.102	0.234	0.815
T1 Vocational Identity	0.681	0.532	0.829	0.698	0.078	8.982	0.000**
T1 Strength of Faith	0.122	-0.097	0.341	0.118	0.108	1.090	0.276
Traditional VCD	0.303	-0.555	1.161	-0.097	0.147	-0.658	0.510
Interaction Term	-0.131	-0.413	0.152	-0.127	0.140	-0.906	0.365

Hypothesis 1c Outcome: Presence of Calling							
<i>Predictor</i>	<i>B</i>	<i>B 95% CI</i>		$\beta$	<i>SE<sub>β</sub></i>	<i>t<sub>β</sub></i>	<i>p</i>
		Lower	Upper				
Constant	1.140	0.615	1.665	-0.070	0.112	-0.627	0.531
T1 Presence of Calling	0.574	0.423	0.724	0.678	0.091	7.408	0.000**
T1 Strength of Faith	0.022	-0.148	0.192	0.034	0.132	0.254	0.799
Traditional VCD	-0.177	-0.784	0.430	-0.090	0.163	-0.554	0.579
Interaction Term	0.043	-0.156	0.242	0.066	0.155	0.425	0.671

*Note.* *N* = 86. *SE<sub>β</sub>* = standard error of the standardized regression coefficient. Traditional VCD coded as 0 = control group, 1 = traditional VCD condition. Interaction term is the product of pre-test strength of faith and the code for traditional VCD. \* *p* < .05 level (2-tailed). \*\* *p* < .01 level (2-tailed).

Table 27  
*Regression Results for Hypothesis 5 Interaction with Strength of Faith*

Hypothesis 5a Outcome: Sense of Purpose							
<i>Predictor</i>	<i>B</i>	<i>B</i> 95% CI		$\beta$	<i>SE</i> $\beta$	<i>t</i> $\beta$	<i>p</i>
		Lower	Upper				
Constant	2.496	1.540	3.453	0.283	0.590	0.479	0.067
T1 Sense of Purpose	0.516	0.376	0.655	0.561	0.078	7.209	0.000**
Spirituality vs. Control	-0.505	-1.553	0.542	-0.252	0.188	-1.341	0.180
Spirituality vs. Traditional	0.065	-0.912	1.042	-0.479	0.192	-2.492	0.013*
T1 Strength of Faith	-0.009	-0.265	0.248	-0.012	0.188	-0.065	0.948
Interaction Term 1	0.112	-0.230	0.453	0.135	0.210	0.641	0.522
Interaction Term 2	-0.134	-0.448	0.180	-0.162	0.193	-0.838	0.402

Hypothesis 5b Outcome: Vocational Identity							
<i>Predictor</i>	<i>B</i>	<i>B</i> 95% CI		$\beta$	<i>SE</i> $\beta$	<i>t</i> $\beta$	<i>p</i>
		Lower	Upper				
Constant	1.299	0.345	2.253	0.059	0.498	0.506	0.613
T1 Vocational Identity	0.681	0.552	0.809	0.698	0.067	10.397	0.000**
Spirituality vs. Control	-0.444	-1.557	0.669	-0.035	0.163	-0.215	0.830
Spirituality vs. Traditional	-0.141	-1.180	0.899	-0.132	0.165	-0.802	0.423
T1 Strength of Faith	-0.018	-0.286	0.250	-0.017	0.133	-0.130	0.897
Interaction Term 1	0.140	-0.221	0.500	0.135	0.178	0.759	0.448
Interaction Term 2	0.009	-0.324	0.342	0.009	0.165	0.053	0.957

Hypothesis 5c Outcome: Presence of Calling							
<i>Predictor</i>	<i>B</i>	<i>B</i> 95% CI		$\beta$	<i>SE</i> $\beta$	<i>t</i> $\beta$	<i>p</i>
		Lower	Upper				
Constant	1.855	1.198	2.513	0.273	0.118	2.309	0.021*
T1 Presence of Calling	0.548	0.423	0.673	0.647	0.076	8.546	0.000**
Spirituality vs. Control	-0.673	-1.402	0.055	-0.346	0.166	-2.093	0.037*
Spirituality vs. Traditional	-0.841	-1.516	-0.167	-0.434	0.169	-2.574	0.010*
T1 Strength of Faith	-0.130	-0.298	0.039	-0.198	0.131	-1.509	0.131
Interaction Term 1	0.163	-0.070	0.396	0.249	0.181	1.373	0.170
Interaction Term 2	0.204	-0.009	0.417	0.311	0.166	1.875	0.061

*Note.*  $N = 127$ .  $SE_{\beta}$  = standard error of the standardized regression coefficient. Spirituality vs. Control coded as 0 = spirituality-infused VCD group, 1 = control group. Spirituality vs. Traditional coded as 0 = spirituality-infused VCD group, 1 = traditional VCD group. Interaction term 1 is the product of pre-test strength of faith and the code for the spirituality-infused condition vs. the control group. Interaction term 2 is the product of pre-test strength of faith and the code for the spirituality-infused condition vs. the traditional VCD condition. \*  $p < .05$  level (2-tailed). \*\*  $p < .01$  level (2-tailed).

Table 28

*Indirect Effects of Spirituality-Infused VCD through Self-Concept Clarity, Career Decision Self Efficacy, and Knowledge of Occupational Information*

Parallel Mediation				B			p	95% CI		
				a path	b path	Effect		Lower	Upper	
Traditional VCD	→	Self-concept Clarity	→	Sense of Purpose	0.010	X	0.324 = 0.003	0.907	-0.083	0.092
Traditional VCD	→	Career Decision Self Efficacy	→	Sense of Purpose	0.020	X	0.452 = 0.009	0.761	-0.078	0.104
Traditional VCD	→	Knowledge of Occ. Info.	→	Sense of Purpose	0.105	X	-0.034 = -0.004	0.745	-0.051	0.034
Traditional VCD	→	Self-concept Clarity	→	Vocational Identity	-0.053	X	0.277 = -0.015	0.561	-0.089	0.050
Traditional VCD	→	Career Decision Self Efficacy	→	Vocational Identity	-0.011	X	0.358 = -0.004	0.859	-0.075	0.064
Traditional VCD	→	Knowledge of Occ. Info.	→	Vocational Identity	-0.000	X	0.324 = 0.000	0.998	-0.131	0.131
Traditional VCD	→	Self-concept Clarity	→	Presence of Calling	-0.002	X	0.357 = -0.001	0.980	-0.089	0.087
Traditional VCD	→	Career Decision Self Efficacy	→	Presence of Calling	0.018	X	-0.068 = -0.001	0.787	-0.037	0.031
Traditional VCD	→	Knowledge of Occ. Info.	→	Presence of Calling	0.095	X	0.062 = 0.006	0.591	-0.027	0.050

*Note.* N = 86. Traditional VCD coded as 0 = control group, 1 = traditional VCD group. \* p < .05 level (2-tailed). \*\* p < .01 level (2-tailed).

Table 29

*Indirect Effects of Spirituality-Infused VCD through Self-Concept Clarity (SCC), Career Decision Self Efficacy (CDSE), and Knowledge of Occupational Information (KOI)*

Parallel Mediation				B			p	95% CI		
				a path	b path	Effect		Lower	Upper	
Spirituality vs. Control	→	SCC	→	Sense of Purpose	-0.213	X	0.267 = -0.057	0.061	-0.153	0.006
Spirituality vs. Traditional	→	SCC	→	Sense of Purpose	-0.200	X	0.267 = -0.053	0.077	-0.149	0.009
Spirituality vs. Control	→	CDSE	→	Sense of Purpose	-0.146	X	0.507 = -0.074	0.075	-0.192	0.013
Spirituality vs. Traditional	→	CDSE	→	Sense of Purpose	-0.136	X	0.507 = -0.069	0.099	-0.187	0.019
Spirituality vs. Control	→	KOI	→	Sense of Purpose	-0.071	X	-0.076 = 0.005	0.684	-0.036	0.056
Spirituality vs. Traditional	→	KOI	→	Sense of Purpose	0.034	X	-0.076 = -0.003	0.832	-0.052	0.042
Spirituality vs. Control	→	SCC	→	Vocational Identity	-0.133	X	0.399 = -0.053	0.211	-0.158	0.037
Spirituality vs. Traditional	→	SCC	→	Vocational Identity	-0.165	X	0.399 = -0.066	0.127	-0.175	0.025
Spirituality vs. Control	→	CDSE	→	Vocational Identity	-0.103	X	0.446 = -0.046	0.191	-0.141	0.031
Spirituality vs. Traditional	→	CDSE	→	Vocational Identity	-0.118	X	0.446 = -0.053	0.140	-0.15	0.023
Spirituality vs. Control	→	KOI	→	Vocational Identity	0.117	X	0.258 = 0.030	0.538	-0.073	0.141
Spirituality vs. Traditional	→	KOI	→	Vocational Identity	0.065	X	0.258 = 0.017	0.737	-0.09	0.128
Spirituality vs. Control	→	SCC	→	Presence of Calling	-0.165	X	-0.117 = 0.019	0.178	-0.012	0.071
Spirituality vs. Traditional	→	SCC	→	Presence of Calling	-0.161	X	-0.117 = 0.019	0.191	-0.012	0.07
Spirituality vs. Control	→	CDSE	→	Presence of Calling	-0.133	X	0.319 = -0.042	0.101	-0.118	0.012
Spirituality vs. Traditional	→	CDSE	→	Presence of Calling	-0.123	X	0.319 = -0.039	0.131	-0.115	0.016
Spirituality vs. Control	→	KOI	→	Presence of Calling	0.002	X	-0.045 = 0.000	0.989	-0.029	0.029
Spirituality vs. Traditional	→	KOI	→	Presence of Calling	0.100	X	-0.045 = -0.005	0.622	-0.040	0.022

*Note.* N = 127. Spirituality vs. Control coded as 0 = spirituality-infused VCD group, 1 = control group. Spirituality vs. Traditional coded as 0 = spirituality-infused VCD group, 1 = traditional VCD group. \*  $p < .05$  level (2-tailed). \*\*  $p < .01$  level (2-tailed).