THESIS

PERSONAL GROWTH INITIATIVE AND CALLING: INTRINSIC MOTIVATION AT WORK

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ABSTRACT

PERSONAL GROWTH INITIATIVE AND CALLING: INTRINSIC MOTIVATION AT WORK

This study examined relationships between personal growth initiative, which is a desire to actively engage in conscious self-improvement, and the vocational construct of calling, which is defined as a sense of meaning derived from work that is pro-social and emanates from a transcendent summons. The study also examined how personal growth initiative and calling variables were related to positive well-being variables and career development variables. The participants (N = 297) were undergraduate students enrolled in a psychology course at a large public university in the western United States. The results suggested that personal growth initiative can be incorporated into the prevailing model of calling in multiple ways. First, evidence suggested that it may function as a predictor of presence of calling. Second, personal growth initiative may function as a moderator between presence of calling and living a calling. Finally, there was evidence that personal growth initiative may be a mediator between presence of calling and positive criterion variables, including life satisfaction and work hope. The results also suggested that living a calling may not be an important goal for college students, which provides evidence for the possibility that a sense of calling has different effects for individuals in different stages of career development. Implications, limitations, and future directions for this research are discussed.

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Introduction

Personal growth entails continued self-improvement, achievement of self-knowledge, and actualization of potential in various life domains (Ryff, 1998). Intentional personal growth is related to well-being (Robitschek, 2012) and positive career outcomes (Robitshek & Cook, 1998). Understanding more about the context in which intentional personal growth relates to well-being at work would advance research in several domains, including positive psychology and vocational psychology. Work is important to well-being because it is a significant life domain and offers opportunity for growth and development across the lifespan (Blustein, 2006). Understanding how to promote well-being within the work domain is relevant to promoting overall well-being, as healthy work has been associated with beneficial physical and mental health outcomes (Tait, Padgett, & Baldwin, 1989; Van de Vliert & Janssen, 2002; Curhan, Elfenbein, & Kilduff, 2009). However, a recent meta-analysis examining the relationship between job satisfaction and subjective well-being found an asymmetrical relationship between well-being and job satisfaction. By comparing results from longitudinal studies, they found that there was a stronger causal relationship between subjective well-being and job satisfaction when subjective well-being was the antecedent and job satisfaction was the consequence (Bowling, Eschleman, & Wang, 2010), suggesting that individuals who experience higher levels of well-being make more adaptive career choices, or that individuals with higher well-being find more satisfaction in work, regardless of career choices.

Understanding factors that contribute to overall well-being, such as personal growth, is an important part of understanding positive occupational outcomes. Calling is Da lens through which many experience meaning in work, and research has demonstrated that a sense of calling

has a significant impact on career development and on well-being (Dik & Duffy, 2009). However, the potential relationships between intentional personal growth and calling and their resulting impact on well-being has remained largely unexamined. Therefore, the purpose of the present study is to examine personal growth initiative and well-being in the context of calling and career development by examining several theoretical models that specify potential relationships between personal growth initiative and calling variables. After a brief literature review detailing research in well-being, calling, and personal growth, several models will be proposed, each with specific hypotheses, based on the conceptual and empirical information available.

Well-Being: Hedonic and Eudemonic Perspectives

Achieving and maintaining well-being and happiness has long been an interest of philosophers and theologians, a tradition that has been continued in the field of psychology. Discussions about well-being in psychological literature have brought about two related but distinct perspectives on well-being: hedonic and eudemonic well-being (Ryan & Deci, 2001). Hedonic well-being focuses on attaining physical and emotional pleasure from garnering material objects and engaging in actions perceived as pleasurable (Kraut, 1979). It essentially concerns the amount to which people feel happy. The hedonic perspective focuses on subjective well-being (SWB). SWB is measured with positive and negative affect, which are distinct assessments of emotional state. Life satisfaction is also measured as part of subjective well-being (Diener, 2000). Activities typically thought of as hedonic, such as sex or consumption, generally engender this form of well-being (Dubé & Le Bel, 2003).

Eudemonic well-being focuses on realizing the "true self" (Norton, 1976), which is the ideal version of each individual. Within this perspective, individuals work towards actualizing

their potential in all areas of life and living in accordance with personal standards (Kashdan, Biswas-Diener, & King, 2009). Understanding and actualizing potential can give direction and meaning to one's life (Waterman, 1993; Norton, 1976). Although well-being from this perspective is not primarily focused on positive sensations, feelings of competence and betterment that result from striving to realize one's true self often produce positive emotional states (Livingstone & Srivastava 2012). Additionally, actions that are intentional and effortful may most effectively increase long-term well-being (Livingstone & Srivastava 2012). From a philosophical perspective, eudemonia is a sufficient but not a necessary cause of hedonia, meaning that hedonic pleasure often coincides with eudemonic pleasure. This perspective has received empirical support (Waterman, Shwartz, & Conti, 2008). Eudemonia is measured by growth oriented aspects of psychological well-being, which includes environmental mastery, self-acceptance, sense of belongingness, meaning in life, and a sense of autonomy (Ryff, 1989). It is possible that meaning in life is the paramount indicator of eudemonic well-being (Peterson, Park, & Seligman, 2005; Steger & Frazier, 2005).

Recently, there has been an initiative within positive psychology to integrate the two perspectives, rather than fixating on one tradition or the other. There is a moderate correlation between scales used to measure hedonic and eudemonic well-being. This correlation suggests that the two are not completely orthogonal and are not mutually exclusive. Both are important to promoting well-being, as both are related to well-being (Tamir & Gross, 2011). Given moderate correlation between measurements derived from the two perspectives, it seems likely that few individuals pursue well-being solely from one perspective. This integrated approach may more accurately represent well-being. Consequently, it seems important to assess well-being from both

perspectives. Personal growth initiative has been associated with positive outcomes from both perspectives (Robitshek, 1998).

Career Outlook and Identity

The way in which individuals orient themselves to their work often plays a role in career development and work meaning. According to Bellah, Madsen, Sullivan, Swidler and Tipton, (1986), individuals with a job orientation tend to focus on interests outside of work. They experience lower career commitment and work only to facilitate pursuits outside of their job. They exhibit low work centrality, as they "work to live," enjoying hobbies and pursuing their primary interests outside of work. In contrast, those with a career orientation tend to focus on pay and prestige within their work, but do not necessarily perceive the work as meaningful. They seem to be more committed to their work than individuals with a job orientation, but they focus on the extrinsic benefits associated with work. Finally, individuals with a calling orientation pursue work that is intrinsically motivating and meaningful. Meaningful work has been linked to increased well-being (Arnold, Turner, Barling, Kelloway, & McKee, 2007) and individuals who believe that their work is purposeful show higher levels of job satisfaction (Sparks & Schenk, 2001).

The relationship between self-identity and occupational decisions is an integral part of career development that has significant ramifications for well-being. Vocational identity is the stability of individuals' abilities and interests and the capacity to explore and establish goals, which is an important part of an effective career (Holland, Daiger, & Power, 1980). Vocational identity achievement is important to realizing career goals that are self-directed and value driven (Hall, 2002; Fugate, Kinicki, & Ashforth, 2004). Vocational identity achievement is a mediator

between presence of calling and life satisfaction (Hirschi & Herrmann, 2012), suggesting that vocational identity achievement is an important part of experiencing a calling.

The Concept of Calling

For many individuals, the process of choosing a career path involves discerning a sense of calling. In a recent dataset collected by Rice University which utilized a stratified random sampling technique of the United States population, roughly 40 % of the sample stated that they felt that they had a calling to a specific career (Emerson & Sikkink, 2012). Other studies (e.g. Duffy & Sedlacek, 2007) have found similar or higher percentages of individuals who indicated that calling was a relevant aspect of their career outlook. Due to the prevalence of individuals who approach their occupation as a calling, and the importance of occupational satisfaction and career development to eudemonic well-being, understanding how individuals can live out their sense of calling to achieve job satisfaction is important to understanding holistic well-being.

The concept of calling has its roots in religious thought. Monks often referred to their pursuit of the monastic life as a calling, and Protestants starting in the 1500s argued that secular occupations can have spiritual significance and that individuals can be called to various professions (Hardy, 1990). Definitions that have included the religious element of calling have been varied. Some researchers have focused on a summons from a higher power (Davidson & Caddell, 1994) or on a direction or giftedness that God bestows on individuals (Sellers, Thomas, Batts & Ostman, 2005). Other definitions have honed in on the desire to impact society (Bellah, et. al., 1986). Though calling has historically been associated with religiosity (Steger, Pickering, Shin, & Dik, 2010), more recent definitions have excluded explicit religious themes.

Some researchers argue that experiencing and responding to a calling can be a secular event. Hall and Chandler (2005) define calling as something that comes from within the

individual, is meant to improve society, is found after searching, and provides meaning and fulfillment to the individual. Although there are similarities between this definition and the previous definitions, this conceptualization lacks a religious component. Some researchers have also argued that the only relevant dimension of calling is that it provides greater meaning in life through the fulfillment of intrinsically motivated goals (Hall & Chandler, 2005). Other definitions focus on primarily on the meaningfulness of work by stating that individuals must feel that that they are actively fulfilling a certain life role that aligns with their larger sense of purpose in life to experience a calling (Savickas, 2005). Although some research has found a relationship between calling and religiosity (e.g. Hunter, Dik, & Banning, 2010), other research has found no relationship between the two variables, suggesting that there is not an inherent link between calling and religiosity (Dobrow, & Tosti-Kharas, 2011). Although there is no consensus on what constitutes a calling, current definitions can be classified using a distinction between "neoclassical" and "modern" definitions. Bunderson and Thompson (2009) suggested that neoclassical approaches incorporate historical perspectives in their definition of calling, focusing on response to a perceived destiny and pro-social duty. Alternatively, "modern" definitions characterize calling as an internal impetus toward self-fulfillment or well-being.

A working definition of calling proposed by Dik and Duffy (2009) attempts to combine these distinct definitions into a cohesive unit. According to this definition, calling involves three main elements: 1) a transcendent summons 2) a career that is perceived as meaningful and 3) is motivated by pro-social "other-oriented" concerns. The transcendent summons refers to a sense that an individual feels the motivation to pursue a particular path comes from an external source, such as a higher power, a social need, a family legacy, or fate. This "summons" is not necessarily religious in nature, although individuals higher in religiosity tend to experience this element of

calling more intensely (Steger et al., 2010). The second part of the definition advances the idea that the work must be perceived as meaningful to the individual, which is a common theme in most definitions of calling (Hirschi, 2011). The final element in this definition of calling is the assertion that some of the meaning derived from work comes from the subjective sense that the individual is working for the betterment of society, toward goals larger than self-advancement. Although social service careers are most often seen as pro-social, any career in which an individual makes meaning by cognitively framing their work as directly or indirectly beneficial to others is fulfilling the pro-social element of a calling (Dik & Duffy, 2009; Hunter, Dik & Banning, 2010). Though calling is most frequently associated with the career domain, individuals can experience multiple callings to a variety of other activities, including parenthood, volunteerism, or any other personally meaningful activity that is pro-social (Dik et al., 2009).

There has been disagreement about the source of calling. Most religious definitions of calling argue the source of a calling is a higher power which is external to the individual. Secular definitions tend to focus more on the source emanating from within the individual through determination of personal abilities and interests. Within the Dik and Duffy (2009) definition, individuals who possessed the last 2 elements of calling but lacked the sense of a transcendent summons had a vocation, not a calling, because the literal meaning and historical usage of "calling" implies a caller. However, the difference between vocation and calling also lacks consensus, as some researchers have used the terms interchangeably (Weiss, Skelley, Haughey, & Hall, 2003). In addition, a current direction in research on calling challenges the transcendent summons element of calling by testing the possibility that the summons emanates from within the person through a sense of duty, or from a feeling of fit between personal abilities and job (Hirschi, 2011).

Career Development and College Students

For many individuals, college is a critical time for career development. College students are trying to find a career that fits their interests and abilities, which involves understanding their identity (Arnett, 2000). As a result, understanding how college students cognitively frame their future career and how it intersects with their developing sense of identity is important. Results from a study conducted by Duffy and Sedlacek (2007) suggest that a large percentage of college students endorse experiencing a sense of calling, suggesting that they resonate with this construct. Because of this, research on calling may be particularly relevant for college student populations insofar as it relates to career development and ultimately well-being.

Searching for, Sensing, and Living a Calling

The construct of calling is split into several elements that attempt to explicate the various stages of calling. In the first stage, individuals may still be actively searching to identify their calling. Individuals who are searching for a calling believe that they are called to certain occupational activities, but have not discovered what their calling entails (Dik & Duffy, 2009). Individuals that are searching without having found their calling often experience lower vocational identity achievement, and lower meaning in life (Dik & Duffy, 2009). However, some studies have found a strong correlation between searching for calling and perceiving a calling (Dik, Eldridge, Steger & Duffy, 2012), suggesting many individuals believe that understanding calling is a continuous process, not a discrete discovery made once and for all. This suggests that many individuals feel the need to adapt to their changing calling, which matches the widely held belief that adaptability is an important part of an effective career (Savickas, 1997). However, perhaps because of the relatively strong correlation between search for calling and presence of calling, search for calling is not widely utilized in calling research.

Presence of calling is the most frequently studied aspect within the construct of calling. This construct involves the extent to which an individual has identified her or his calling. The presence of calling has been associated with higher work satisfaction, higher life satisfaction, higher vocational identity achievement, greater vocational self-clarity and choice comfort (Duffy & Sedlacek, 2007), and a greater sense of global meaning in life (Dik & Steger, 2008). This suggests that perceiving a calling is related to a sense of purpose that aligns with personal interests and attributes and comes from one's occupation, though it can come from other activities as well.

Living a calling represents one of the most recent developments in calling research. Individuals are living their calling when they feel that they have identified their calling and are actively fulfilling their calling (Duffy, Bott, Allan, Torrey, & Dik, 2012). Duffy et al. (2013) has argued that living a calling is the most important element of calling. This is because living a calling marks the continued actualization of the goals set forth by a calling. This coincides with the goals of the eudemonic perspective of well-being, the betterment of personal growth, and benefits of intrinsic motivation, as applied to the work domain. The construct explains many of the positive outcomes associated with calling. While presence of calling is related to some positive outcomes, living a calling has been associated with additional positive outcomes, and has fully mediated the relationship between presence of calling and many of these positive outcomes (Duffy, Allan & Bott, 2012). However, there is some mixed evidence, as living a calling did not mediate the relationship between presence of calling and life satisfaction among college students (Duffy, et al., 2012) Therefore, the present study seeks to identify potential relationships with a sense of living a calling.

While a fulfilled sense of calling can contribute to well-being and positive work outcomes, there are also dangers and drawbacks of experiencing a calling, known as the dark side of calling. After controlling for the positive effects of vocational identity achievement, presence of calling was negatively correlated with life satisfaction (Hirschi & Hermann, 2012). This suggests that simply understanding one's calling may not be sufficient to produce positive outcomes, and that a thwarted sense of calling may be detrimental. Individuals who have a sense of calling are also less likely to heed the career advice of trusted confidantes, suggesting that some individuals who sense a calling experience lower career adaptability (Dobrow & Tosti-Kharas, 2012). This may mean that they persist in an unhealthy career, or exhibit inflexibility in careers. Because calling is related to intrinsic motivation, individuals who only experience intrinsic motivation may be more at risk of encountering the downsides of calling. Individuals who intensely experience and pursue a calling may not seek extrinsic benefits of work, leaving them more susceptible being taken advantage of by employers, by accepting lower pay and reduced benefits (Bunderson & Thompson, 2009). They may also work longer hours than necessary, leading to decreased quality of life in other areas, such as personal relationships (Cardador & Caza, 2012). Future research is needed to determine what constitutes healthy and unhealthy callings, and to determine protective factors against the negative effects of calling.

Personal Growth

Personal growth can be stimulated by developmental, environmental, or intentional processes (Prochaska & DiClemente, 1986). In the developmental domain, growth or change typically occurs outside an individual's awareness. When engendered by the environmental stressors, personal growth occurs with an individual's awareness, but is catalyzed by an external event, and the individual may resist some of the changes that occur. Finally, personal growth that

results from intentional processes occurs when the individual is cognizant of the positive changes and is an active part of the process.

Personal growth is an integral part of the eudemonic perspective of well-being, and promoting personal growth in various life domains is tantamount to understanding and promoting holistic well-being. According to Ryff (1989), personal growth involves self-improvement, achievement of self-knowledge, and actualization of potential in various life domains, which is a core part of the eudemonic outlook. Personal growth has been examined as an outcome in its own right, as an indicator of and contributor to well-being, and as a continuing process.

Personal growth and the eudemonic perspective favor sacrificing short term pleasure in the pursuit of long term goals, which can lead to long term improvements in well-being (Livingstone & Srivastava, 2012). The pursuit of personally relevant goals is considered part of optimal functioning (Tamir & Gross, 2011 p. 92; Emmons, 2003), and the top-down approach to well-being suggests that personal growth is an important element of developing skills to enhance and maintain high levels of well-being (Livingstone & Srivastava, 2012). Personally relevant behaviors, which include behaviors that are effortful and lead to a sense of accomplishment, are related to well-being, and goal focused behaviors also have been related to increased well-being (Henricksen, & Stephens, 2013). "Betterment," which includes efforts to improve oneself, is an effective method of promoting well-being (Livingstone & Srivastava, 2012). Various theorists emphasized related concepts such as self-actualization (Maslow, 1968) and a natural drive towards improvement (Rodgers & Stevens, 1961). Although not specifically referred to as personal growth, these behaviors encompass the concept of personal growth because they are effortful striving toward improvement that is adaptive insofar as it increases well-being.

The process of personal growth and self-improvement has been examined in relation to curiosity. Individuals higher in trait curiosity report higher levels of personal growth and curiosity has the strongest correlation with personal growth, suggesting that the two constructs are very similar (Kashdan, Gallagher, Silvia, Winterstein, Breen, Terhar & Steger, 2009). Curiosity differs from other emotions because its focus is on growth and expansion (Kashdan & Steger, 2007). It is related to adaptability, as individuals higher in curiosity expand their skills and knowledge, and engage in more goal-oriented behavior (Ainley, Hidi & Berndorff, 2002). According to a model focusing on curiosity and personal growth proposed by Kashdan et al. (2004), personal growth involves four distinct elements. (1) Increased awareness of environmental stimuli to orient oneself to challenging or novel situations or experiences, (2) Cognitive and behavioral exploration of the novel situation or experience, (3) Intense engagement with the stimulus which is rewarding, and (4) Integration of the experiences. Curiosity is related to higher levels of meaning in life that may come from growth (Kashdan & Steger, 2007). It is also related to other forms of well-being (Park, Peterson, & Seligman, 2004).

Intrinsic motivation is another construct that is similar to intentional personal growth. According to Ryan and Deci (2000; P.3), intrinsic motivation is "the inherent tendency to seek out novelty and challenges, to extend and exercise one's capacities, to explore, and to learn," and involves engaging in activities and behaviors for their own sake, rather than for some perceived good external to the behavior itself. There are striking similarities between conceptualizations of intrinsic motivation and personal growth, because intrinsic motivation involves fulfillment of personal capacities, and seeking out newness in life, which is similar to Ryff's (1989) definition of growth and similar to Kashdan et al's (2004) process that results in growth. In addition, self-realization value (Waterman, 1993), which is the perception that a behavior develops individual

potential or advances the achievement of personally relevant goals, is a predictor of intrinsic motivation and its positive effects, which include enjoyment, interest, flow, and feelings of personal expressiveness (Waterman et. Al., 2008). Intrinsic motivation's focus is building on and extending capacities while learning, which is similar to the adaptive elements of personal growth (Frederickson, 2001). As a result, intrinsic motivation may be an integral part of personal growth initiative across the lifespan.

Within vocational psychology literature, intentional growth and career adaptability are important parts of a successful, fulfilling career (Ebberwin, 2008). An active interest in self-improvement may be an adaptive element of career development (Savickas, 1997). Individuals who are more ready for or capable of personal growth may be more willing to devote cognitive and affective resources to career development. Curiosity, which is intentional in nature and is strongly linked to personal growth, is related to academic and occupational outcomes, including higher job performance (Mussel, 2013). Intrinsic motivation, which encompasses the drive towards personal growth, is an integral part of calling (Dik & Duffy, 2009).

Personal Growth Initiative

Personal Growth Initiative (PGI) is a future-looking perspective in which individuals believe they will be able to improve themselves. It involves a desire to engage in growth, a perceived ability to recognize the resources required, and a particular plan that will allow the individual to realize their personal growth goals (Robitshek, 1998), and is a paramount expression of eudemonia (Robitschek & Keyes, 2009). Unlike other growth scales and constructs that focus on the amount individuals passively perceive their growth (Ryff, 1989), personal growth initiative examines an individual's active interest in self-improvement. In addition, other constructs examine personal growth as an outcome, whereas personal growth initiative focuses

on personal growth as a process (Robitschek 1998). PGI is a metacognitive construct indicating an intentional engagement in growth-inducing thoughts and behaviors in all life domains.

Most research on personal growth initiative has been conducted using the uni-dimensional personal growth initiative scale (PGIS; Robitshek, 1998). Although it measured the elements that contributed to personal growth initiative, it did not demarcate the different elements. A recently developed version of the scale (Robischek et. al., 2012) is multi-dimensional, examining the components of personal growth. The four parts of the Personal Growth Initiative Scale-II coincide with the multifaceted conceptualization of personal growth initiative. The first dimension, *planfulness,* assesses the extent to which a person feels that she or he is capable of understanding and planning the process of growth. The second dimension, *readiness for change*, measures an individual's preparedness for making changes that would result in personal growth. The third dimension is *intentional behavior,* which involves conscious behavioral modifications aimed at personal development and realizing potential. Finally, *using resources* involves the willingness and capacity to utilize external resources as part of the improvement process. This last dimension did not fit other theories of personal growth, but suggested that the ability to seek out and utilize help may be an important part of growth (Robischek et. al., 2012). Planfulness and readiness for change assess the cognitive elements of PGI, while intentional behavior and using resources capture the behavioral facets of the construct. The PGIS-II is anticipated to correlate with the same variables as the PGI due to conceptual similarities.

Because of its focus on active involvement, personal growth initiative is related to internal locus of control, environmental mastery, and self-efficacy (Robitschek, Ashton, Spering, Geiger, Byers, Schotts & Thoen 2012). However, it is different from internal locus of control and

self-efficacy because of its emphasis on behaviors in addition to cognitions or perceptions (Robitschek, 1998). PGI goes beyond the belief that change and improvement can be achieve by actively endeavoring to realize positive change. PGI encompasses many of the concepts found in curiosity, because curiosity includes a willingness to enter novel situations and an ability to cope with novel situations, which can lead to growth (Kashdan, et. Al., 2004). Kashdan, et al. (2004) found that curiosity was related to personal growth, positive affect, and lessened negative affect, which are all correlates of personal growth initiative.

Personal Growth Initiative has been associated with many positive outcomes. PGI is related to elements of psychological well-being, including heightened self-acceptance (Robitschek & Keyes, 2009) and personal growth. It also is related to increased positive affect and decreased negative affect and increased satisfaction with life (Robitschek, 1998). It has also been associated with positive adaptability, including problem-focused coping and lowered trait anxiety. Because it is future-oriented, it is related to hope and optimism (Shorey, Little, Snyder & Robitschek, 2007). It is a mediator between achievement recognition and life satisfaction, suggesting that recognition may promote personal growth initiative, which then produces life satisfaction (Stevic & Ward, 2008).

Personal growth initiative and PGIS-II appear to be multiculturally relevant. It has been found at similar levels among different ethnic and racial groups (Robitschek, 2003), and has been related to acculturation and positive adaptation among international students visiting the United States (Yakunina, Weigold, & Weigold, 2013; Yakunina, Weigold, Weigold, Hercegovac, & Elsayed, 2013). However, future research on PGI should be conducted with individuals from various backgrounds to parse out potential effects of differences between individuals with different cultural backgrounds.

Given the similarities between the career development process and the personal growth process, and the evidence that personal growth initiative positively impacts career identity development and career commitment (Weigold, Porfeli, & Weigold, 2013), it seems likely that higher personal growth initiative will lead to positive calling outcomes, and may help explain positive outcomes on various well-being measures.

Personal Growth Initiative and Calling

There are conceptual similarities between living a calling and personal growth initiative. In both constructs the individual is actively and intentionally pursuing meaningful goals that coincide with the person's self-identity. Because meaningful work is integral to most definitions of calling, personal growth initiative and living a calling are similar regardless of the conceptual definition of calling. Personal growth initiative reflects intrinsic motivation to realize meaningful goals, while discovering and living a calling is the achievement of goals that are intrinsically motivated. Individuals who pursue intrinsically motivated goals tend to have higher levels of subjective well-being than extrinsically motivated individuals (Ryan & Deci, 2000), which suggests that these constructs may help explain well-being outcomes in work.

Qualitative research on calling has revealed that personal growth is important to some individuals' understanding of calling and its behavioral implications, suggesting that some believe pursuing a calling and active self-improvement are similar (Hunter et al. 2010). But there have not been any quantitative research studies that examine personal growth initiative and the elements or dimensions of calling. Additionally, there has been little research directly focusing on what personal characteristics or attitudes predict or foster a calling among individuals, as extant research has focused on the positive outcomes that calling can predict. The current study aims to fill these gaps.

The Proposed Study

The proposed study will examine three theoretical models that offer explanations for the relationships between personal growth, elements of calling, and positive outcomes. The study will test PGI as (1) a predictor of calling, (2) as a moderator of calling variables and outcomes, and (3) as a mediator of calling variables and outcomes. Personal growth initiative is applicable to many domains, which means that personal growth initiative could impact career development at multiple stages, improving outcomes in several calling-related areas. In addition, the study will examine how personal growth protects against potential negative outcomes that are related to an inability to live a calling. Although there is no extant research examining these relationships, there is conceptual support for these three models that could account for the relationship between PGI and calling. Several models with specific hypotheses are proposed, based on conceptual similarities between personal growth initiative and calling. It is expected that model 1, which suggests PGI is a predictor of presence of calling, will have the most support.

Model 1: PGI as a predictor

Personal growth initiative is related to increased environmental exploration, and it is a mediator between environmental exploration and vocational identity (Robitshek & Cook, 1999). Vocational identity and presence of calling are conceptually and statistically similar (Hirschi, 2011). Therefore, personal growth initiative may be an individual difference that helps individuals discover their calling, which means that personal growth initiative would predict presence of calling.

Hypothesis 1a: Personal Growth Initiative predicts presence of calling.

Conceptually, presence of calling precedes living a calling, and the prevailing model supports this relationship (Duffy et.al., 2011). If PGI predicts presence of calling and presence of calling leads to living a calling, then presence of calling should function as a mediator between the relationship between PGI and living a calling.

Hypothesis 1b: Presence of calling partially mediates the relationship between Personal Growth Initative and Living a calling.

Living a calling would then be related to occupational and well-being outcomes, which has received empirical support in prior studies (Duffy et al., 2011; Duffy et. Al., 2012). In particular, living a calling would fully mediate the relationship between presence of calling and several positive outcomes, including life satisfaction, meaning in life, academic satisfaction, vocational identity achievement, and work hope.

Hypothesis 1c: Living a calling fully mediates the relation between presence of calling and both career development (academic satisfaction, vocational identity achievement, work hope) and general well-being (life satisfaction, meaning in life) criterion variables.

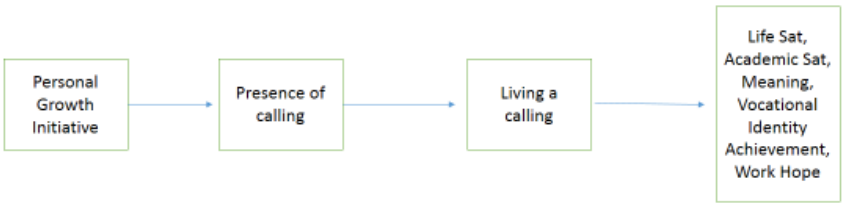

Figure 1. Hypothesized model of calling with personal growth initiative as a predictor

Model 2: PGI as a Moderator

It is possible that individuals high in personal growth initiative may frame barriers to living a calling as an opportunity for self-improvement rather than a threat. In addition, PGI is related to lower self-discrepancy (Hardin, Weigold, Robitschek, & Nixon, 2007), which may mean that individuals higher in PGI may be more likely to feel that they are living a calling, since experiencing a calling without fulfilling a calling would represent self-discrepancy. Because PGI is related to achievement (Stevic, & Ward, 2008) and adaptive coping (Robitschek & Keyes, 2009), individuals who are higher in PGI may be more motivated to pursue goals that allow them to live out their calling. Therefore, it seems feasible that PGI would moderate the relationship between presence of calling and living a calling, such that the relationship between presence of calling and living a calling is stronger for individuals who are higher in personal growth initiative.

Hypothesis 2a: Personal Growth Initiative moderates the relationship between presence of calling and living of calling.

Individuals face many potential barriers to engaging their primary career, and inflexibility has been suggested as a possible negative aspect of calling. Personal growth initiative has been associated with adaptive coping (Robistchek & Keyes, 2009), and may serve as a buffer against negative effects of feeling that one has a calling but is not living it. In addition, PGI is related to many well-being outcomes, including life satisfaction, positive affect, and purpose in life (Robistchek & Keyes, 2009). Therefore, personal growth initiative may serve as a protective factor against potential negative effects of calling by moderating the relationship between presence of calling and positive well-being and career outcomes such that the relationship between presence of calling and positive outcomes is stronger for individuals who are higher in personal growth initiative.

Hypothesis 2b: Personal Growth Initiative moderates the relationship between presence of calling and both career development (academic satisfaction, vocational identity achievement, work hope) and general well-being (life satisfaction, meaning in life) criterion variables, such that the relationship between presence of calling and outcome variables is stronger for individuals higher in PGI.

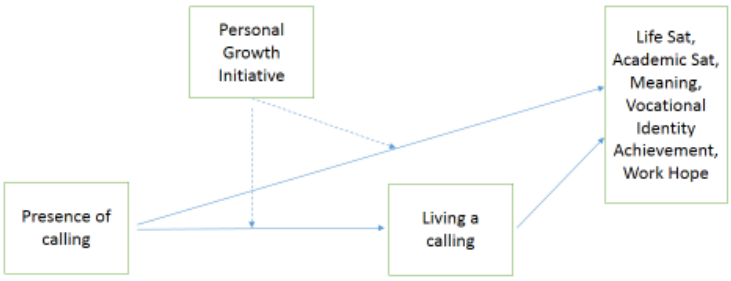

Figure 2. Hypothesized model of calling with personal growth initiative as a moderator

Model 3: PGI as a Mediator

PGI may also mediate relationship between calling and positive outcomes. Work volition is a mediator between presence of calling and living a calling (Duffy et. Al., 2012). Work volition is the perceived ability to exercise control over career development. There are conceptual similarities between PGI and work volition, because both involve internal locus of control. PGI may also mediate the relationship because it involves goal-oriented behaviors. In this case, presence of calling may produce career goals, the fulfillment of which would be mediated by personal growth initiative. Therefore, it is possible that PGI mediates the relationship between presence of calling and living a calling

Hypothesis 3a: Personal Growth Initiative partially mediates the relationship between presence of calling and living a calling.

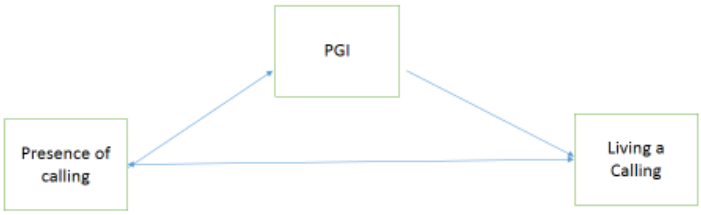

Figure 3. Personal growth initiative is hypothesized to partially mediate the relationship between presence of calling and living a calling

PGI is related to self-efficacy (Robitschek, 1998), which is conceptually similar to career decision making self-efficacy. Career decision making self-efficacy is individuals' perception

that they will be able to find a career that aligns with their needs. It is a mediator between presence of calling and academic satisfaction (Duffy et. Al., 2011). PGI is related to hope (Shorey et. Al., 2007), and work hope is a mediator in the relationship between presence of calling and academic satisfaction (Duffy et. Al., 2011). PGI is also related to internal locus of control, which is related to several positive outcomes in career decision making, including ability to choose an effective career (Işik, 2012). These findings suggest that PGI may account for the relationship between presence of calling and several outcomes as a mediator. In particular, PGI may mediate the relationship between presence of calling and living a calling. It is also possible that PGI mediates the relationship between presence of calling and several positive outcomes, including life satisfaction, academic satisfaction, meaning in life, vocational identity achievement, and work hope.

Hypothesis 3b: Personal Growth Initiative partially mediates the relationship between presence of calling both in career development (academic satisfaction, vocational identity achievement, work hope) and general well-being (life satisfaction, meaning in life) criterion variables.

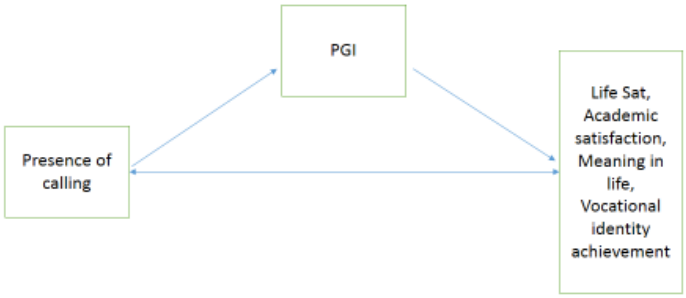

Figure 4. Hypothesized mediation of presence of calling and criterion variables by personal growth initiative

Method

Participants and Procedure

Participants (*N* = 297) were students enrolled in PSY 100 and drawn from the research pool at Colorado State University. The mean age was 18.95 (*SD* = 1.69), 52% of participants identified as female (*N* = 155), 47% identified as male (*N* = 138), and 1% identified as other (*N* = 3). 84% of participants were White/European American (*N* = 252), 8.4% were Latina/o (*N* = 25), three percent were African American (*N* = 9) and 1.7% were Asian American (*N* = 1.7), and 4 identified themselves as 'other' (*N* = 6). 69% of participants were Freshmen (*N* = 205) 18.9% were Sophomores (N = 56), 8.4% were Juniors (N = 25), 3.4% were Seniors (10), and one participant identified as 'other'. After providing informed consent, students answer questions provided via qualtrics online survey for 1 hour of required course credit. No other compensation was provided. Individuals who did feel that questions regarding living a calling were applicable to them (*N* = 39) were removed from analyses that included living a calling.

Instruments

Demographics. Participants provided their age, gender, race/ethnicity, year in school (freshman, sophomore, junior, senior). This data was used to assess potential differences and to ensure homogeneity across groups. Age was not significantly correlated with any of the variables, suggesting that age did not impact any of the analyses. Several One-way ANOVAs were conducted to assess the potential impact of year in school on the main variables used in the analysis, including presence of calling, $F(4,292) = .23$, $p = .92$, personal growth initiative, $F(4,292) = .56$, $p = .70$, and living a calling $F(4,253) = .26$, $p = .91$. No significant differences were found on these demographic variables, except with gender on presence of calling. Between

Subject T-tests were conducted to assess the potential impact of gender and found presence of calling was higher among women when assessed by the Calling and Vocational Questionnaire $t(291) = 3.28$, $p = .001$. This suggests that there may be an effect of gender on calling variables, though there was no differences between women and men on presence of calling when assessed by the Brief Calling Scale $t(291) = .92$, $p = .36$.

Calling and vocational questionnaire. The Calling and Vocational Questionnaire (CVQ; Dik et al., 2012) is a 24-item scale intended to assess an individual's presence of (e.g. "I know what my calling is") and search for calling (e.g. "I am still searching for my calling"). The measures uses a four-point continuous scale ranging from 0 (highly disagree) to 4 (highly agree). Higher scores reflect higher presence of calling and higher search for calling. Each element of calling has three subscales, reflecting the three dimensions of calling. 1) Transcendent summons, 2) Meaningful work, and 3) Pro-social orientation, totaling six subscales. The scores for each 12 item set are summed to create composite scores. Data from studies validating the scale suggest that the presence of calling composite score has fairly high internal consistency reliability (α =.89) and 1-month test– retest reliability (r =.75). The search for calling composite also has acceptable internal reliability (α =.87) and 1 month test –retest reliability of r = .67 for search for calling. Scores showed evidence of construct validity, as presence of calling is related to conceptually similar constructs, including intrinsic work motivation, pro-social work orientation, and work hope, while search for calling is related to pro-social work orientation and search for meaning in life (Dik et al., 2012). Because this scale is longer and has more construct validity than the Brief Calling Scale, it was used in all analyses except for mediation with Vocational Identity Achievement, because the Brief Calling Scale was significantly correlated with vocational identity achievement.

Brief Calling Scale. The Brief Calling Scale (BCS; Dik, Eldridge, Steger & Duffy, 2012) is a 4-item scale with two subscales intended to measure the presence of and search for calling. Two items assess presence of calling (e.g. "I have a calling to a particular kind of work") and two items assess search for calling (e.g. "I am trying to figure out my calling in my career"). Items are assessed on a 5 point scale ranging from 1 (*Not at all true of me*) to 5 (*Totally true of me*). Several studies support the validity and reliability of the scale (Dik et al., 2012; Dik et al., 2008; Duffy & Sedlacek, 2007).

Living a calling. The Living a Calling scale (Duffy et al., 2011) is a 6 item scale intended to assess the level at which an individual is living their calling (e.g. "I am currently working in a job that closely aligns with my calling.") The questions are on a 7 point Likert scale ranging from 1 (*highly disagree*) to 7 (*highly agree*). *Not applicable* was also available for individuals who did not sense of calling. Higher scores are indicative of living of calling. The scale has high internal reliability (α = .95). It is also related to presence of calling (.46) work meaning (.62) and career commitment (.68), which are conceptually similar to living a calling, suggesting that the scale has acceptable construct, concurrent, and discriminant validity. Because 3 items in this scale refer to a specific job, they were deemed inappropriate for a college student sample. We investigated the remaining three items (e.g. "I am consistently living out my calling.") and found acceptable internal consistency reliability (α = .85). We also investigated differences between the two versions of the scale. Level of living a calling was significantly higher when the three questions that do not focus on current job were compared to the three questions that do focus on current job $t(257) = 3.24$, $p < .001$.

Personal growth initiative. The personal growth initiative scale – II (PGIS-II; Robitschek et al. 2012) was designed to assess an individual's level of personal growth initiative.

The multidimensional scale measures four elements of personal growth: readiness for change, planfulness, intentional behaviors, and using resources. Responses for the 16 question measure are arranged in a Likert scale in which the answers range from 0 (*strongly disagree*) to 5 (*strongly agree*). Higher scores are indicative of greater personal growth initiative. The scale is related to the original personal growth initiative scale (r = .59), and is moderately related to conceptually similar constructs such as internal locus of control (r = .41), and assertiveness (r = .43), suggesting acceptable convergent and discriminant validity (Robitschek et al. 2012).

Academic Satisfaction. Academic Satisfaction was measured with the 7 item scale developed by Lent, Singley, Sheu, Schmidtt, and Schmidtt (2007). The scale asks responders to rate their agreement to questions (e.g. "I am generally satisfied with my academic life") on a 5 point scale, ranging from 1 (*strongly disagree*) to 5 (*strongly agree*), with higher scores reflecting greater academic satisfaction. The scale is related to conceptually similar variables, including outcome expectations, goal progress, and self-efficacy (Lent et al., 2007). Scores on the measure also have high internal consistency reliability (α = .93; Duffy, Allan & Dik, 2011).

Satisfaction with life. The Satisfaction with Life Scale (SLS; Diener, Emmons, Larsen & Griffin, 1985) is a 5 item scale intended to measure individuals' satisfaction with life. Example items include: "The conditions of my life are excellent" and "So far I have gotten the important things I want in life." Participants answered items on a 7-point scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Scores were summed to create a composite score. Higher scores are indicative of higher life satisfaction. The scale has been widely used and has acceptable reliability and validity (Diener et al., 1985).

Meaning in life. The Meaning in Life Questionnaire (MLQ; Steger, Frazier, Oishi & Kaler, 2006) is a 10 item scale that assesses for the amount individuals are experiencing a search

for meaning and the presence of meaning in their life. Questions are answered on a 7 point scale, from 1 (*absolutely untrue)* to 7 (*absolutely true*). Higher scores reflect higher search for meaning or higher presence of meaning. The internal reliability (α = .86) and the one month test re-test reliability (.70) are acceptable for the scale. In addition, the scale is correlated with variables that it is expected to correlate with, including depression (r = -.48) and life satisfaction (r = .46), suggesting acceptable concurrent validity. It is also related to a variety of vocational outcomes, including work meaning (r = .57).

Vocational identity achievement. Vocational Identity Achievement (VIA) was measured with Vocational identity subscale of the My Vocational Situation Scale (MVS: Holland, 1980) The 18 item scale asks questions about interests and goals (e.g. "I am uncertain about the occupations I could perform well"), and participants respond in a true-false format. The scale has acceptable reliability (.96), and acceptable validity (Holland, 1997).

Work hope scale. The Work Hope Scale (WHS; Juntunen & Wettersten, 2006) assesses the extent to which individuals experience work hope, which is characterized by motivation to pursue work goals, a positive outlook on their ability to reach goals, and a sense of agency in regard to those goals. The 24 item (e.g. "I expect to do what I really want to do at work") is arranged on a 7 point Likert scale from 1 (*strongly disagree*) to 7 (*strongly agree*). The scale has excellent internal consistency reliability (α = .93) and two week test-retest reliability (α = .90). It is correlated with optimism, vocational identity, and career decision making, suggesting convergent validity (Juntunen & Wettersten, 2006).

Social Desirability Scale. The Crowne-Marlow social desirability scale (CMSDS; Crowne & Marlowe, 1960) assesses the extent to which individuals respond in a way that is socially desirable. The scale contains 33 items in which participants respond in a True False

fashion. This scale has been used substantially to assess for validity of self-report responses. However, internal consistency reliability within this sample was somewhat low, suggesting a potential problem with the scale in this sample. Correlations between Social Desirability and the variables of interest were low to moderate, suggesting that they do not account for a substantial amount of variance. Hoyt, Warbasse, & Chu (2006) suggests that using this social desirability as a control variable in inferential analyses is ineffective because it has low construct validity and because it often accounts for variance between the variables of interest (Hoyt, Warbasse, & Chu, 2006) that is not due to socially desirable responding. Therefore, it was not used for the inferential analyses within this study.

Results

Of the 316 original participants, 19 were removed from the analysis because they were missing more than 5% of their responses (Tabachnick & Fidell, 2007), which led to a final count of 297 participants (N = 155 Women; N = 138 Men; N = 3). Participants were an average of 18.97 years old (SD = 1.67) . As per guidelines suggested by Duffy et.al. (2012), individuals who answered "not applicable" on any of the living a calling variables were removed from analyses that included living a calling. This left 258 participants for analyses that directly included living a calling as part of the analysis.

Several tests were conducted to determine if assumptions of normality of variance and homogeneity of variance had been met. Visual inspection of histograms and boxplots suggested that the data roughly fit the normal curve for all main variables involved in the analyses, which may be an acceptable method for assessing normality given the sample size is close to 300 (Tabachnick & Fidell, 2007). According to (Tabachnick & Fidell, 2007), for small to moderate sample sizes, the skewness and kurtosis should not exceed 3.9 times the standard error of skewness and kurtosis, which would correspond with an alpha level of .001. Using these approaches, all variables in the analysis appeared to be normally distributed. These values can be found in Table 1.

Table 1

Skewness and Kurtosis Values

	Skewness	*SE(skewness)*	*Kurtosis*	*SE(kurtosis)*
1. CVQ-P	-0.14	0.14	-0.06	0.28
2. PGIS-2	-0.27	0.14	-0.09	0.28
3. BCS-P	-0.16	0.14	-0.69	0.28
4 LC-SF	-0.15	0.15	-0.77	0.30
5. MLQ-P	-0.28	0.14	-0.14	0.28
6. SLS	-0.22	0.14	-0.49	0.28
7. AMSS	0.03	0.14	-0.98	0.28
8. WHS	0.45	0.14	.-0.56	0.28
9. VIA	0.07	0.14	-1.02	0.28
10. Social Desirability	0.01	0.14	0.04	0.28

Note: CVQ-P = Calling Vocational Questionnaire Presence of Calling subscale; PGIS-2 = Personal Growth Initiative Scale 2; BCS-P = Brief Calling Scale Presence of Calling subscale; LC-SF = Living a Calling Short Form MLQ = Meaning in Life Questionnaire Presence of Meaning subscale; SLS = Satisfaction with Life Scale; AMSS = Academic Major Satisfaction Scale; WHS = Work Hope Scale; VIA = Vocational Identity Achievement

Preliminary analyses

Missing data analyses were conducted to determine the extent and impact of missing data in the sample. No variable in the dataset was missing more than 3% of the overall data. Individuals with missing data were not significantly different from individuals with complete data sets on the main variables of interest. T-tests were run between individuals with missing data and individuals with complete data sets. All t-values were less than $t = 1.97$ and did not reach significance with an alpha level of .05. Several authors (Obsourne, 2012; Schafer & Graham, 2002) suggest that scale mean imputation for scales that have high internal consistency reliability ($\alpha > .70$) is an acceptable practice for dealing with missing data. Given that all scales had internal consistency reliability above .70 (Table 1), except for social desirability which is close to .70, series mean imputation appears to be acceptable. In addition, Acuna and Rodriguez (2004) suggest that there is little difference between mean imputation or multiple imputation for

dealing with missing data when missing data is relatively low (between one and five percent) regardless of whether or not the data is missing at random (MAR) or missing completely at random (MCAR). Means, standard deviations, range and correlations for all variables can be found in Table 2.

Table 2

Descriptives and Correlations between Variables in Analysis

Variable	*M*	*SD*	*min*	*max*	1	2	3	4	5	6	7	8	9	10
1. CVQ-P	2.69	0.58	1.00	4.00	0.86									
2. PGIS-2	4.55	0.05	2.13	6.00	0.40**	0.94								
3. BCS-P	3.18	1.15	1.00	5.00	0.62**	0.39**	0.84							
4 LC-SF	4.21	1.61	1.00	7.00	0.41**	0.24**	0.62**	0.87						
5. MLQ-P	4.64	1.20	1.20	7.00	0.40**	0.35**	0.46.**	0.39**	0.84					
6. SLS	4.90	1.19	1.60	7.00	0.14*	0.43**	0.23**	0.17**	0.36**	0.88				
7. AMS	3.57	0.93	1.33	5.00	0.12*	0.14*	0.17**	0.04	0.17**	0.26**	0.93			
8. WHS	4.89	0.81	3.13	7.00	0.23**	0.44**	0.29**	0.20**	0.47**	0.51**	0.51**	0.91		
9. VIA	1.49	0.29	1.00	2.00	0.07	0.18**	0.25**	0.21**	0.36**	0.30**	.42**	0.48**	0.89	
10. Social Desirability	1.51	0.14	1.18	1.91	0.04	0.27**	0.18**	0.17*	0.27**	0.22**	0.13*	0.30**	0.35**	0.69

* $p > .05$, ** $p > .01$, Note: The diagonal contains crohnbach's alpha for the entire sample.

Note: CVQ-P = Calling Vocational Questionnaire Presence of Calling subscale; PGIS-2 = Personal Growth Initiative Scale 2; BCS-P = Brief

Hypothesis 1a

Hypothesis 1a stated that Personal Growth Initiative would predict presence of calling. A single linear regression analysis was run in which presence of calling was regressed on personal growth initiative to determine the extent to which personal growth initiative predicts presence of calling. PGI was a significant positive predictor of presence of calling (b = .29 $SE(b)$ = .04, β = .40, t = 7.54, p < .001, 95% CI [.21, .37]). Overall, personal growth initiative accounted for 16% of the variance in presence of calling, suggesting that this hypothesis was supported.

Hypothesis 1b

Hypothesis 1b stated that presence of calling would mediate the relationship between personal growth initiative and living a calling. In all mediation analyses, three models were run according to guidelines from MacKinnon, Fairchild and Fritz (2007). In the first model, the association between the predictor variable and the criterion variable was tested. In the second model, the association between the predictor variable and the mediating variable (personal growth initiative) was tested. In the third model, the predictor variable and the mediating variable were used to predict scores on the criterion variable. A Sobel test was conducted to determine significance of indirect effects. If this significance was found, a bootstrapping analysis was employed in accord with guidelines recommended by Shrout and Bulger (2002). All mediation analyses were conducted using an identical procedure.

Several regression models were run to investigate if presence of calling mediates the relationship between personal growth initiative and living a calling. In the first model, living a calling was regressed on personal growth initiative. In the second model, presence of calling was regressed on personal growth initiative. In the third model, living a calling was regressed on personal growth initiative and presence of calling. Results of these regression analyses can be

found in Table 3 and in Figure 5. A Sobel test was conducted and determined that the indirect effect (.29) was significant ($p < .001$). The confidence interval determined from 5000 bootstrapped samples did not include zero, 95% CI [.17, .43], suggesting that it was significant at the $p < .05$ level (Shrout et. al., 2002). The ratio of the indirect effect (.29) to the direct effect of personal growth initiative on living a calling (.48) suggested that presence of calling accounted for 60% of the observed effect of personal growth on living a calling, which indicates that this hypothesis was supported.

Table 3
Presence of Calling as a Mediator Between Personal Growth Initiative and Living a Calling

Model and Variable	*B*	*SE(b)*	*β*	t	95% CI		R^2
					Lower	Upper	
Model 1: Criterion Variable: Living a Calling							
Personal Growth Initiative	0.48	0.12	0.24	3.89***	0.24	0.72	0.06
Model 2: Criterion Variable: Presence of Calling							
Personal Growth Initiative	0.27	0.04	0.40	6.55***	0.19	0.34	0.14
Model 3: Criterion Variable: Living a Calling							
Presence of Calling	1.10	0.18	0.39	6.17***	0.75	1.45	
Personal Growth Initiative	0.19	0.12	0.09	1.51	-0.06	0.43	0.18

* $p < .05$, ** $p < .01$, *** $p < .001$.

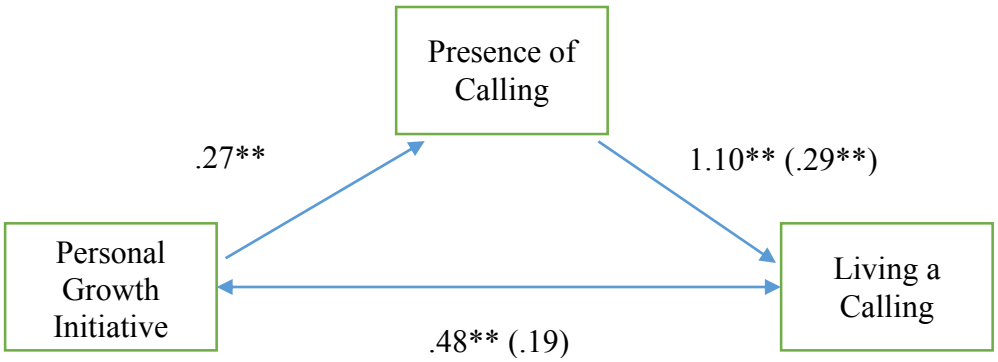

Figure 5. Presence of calling as a mediator between personal growth initiative and living a calling. Numbers in parenthesis represent indirect effect of the mediator and direct effect of predictor on criterion variable after controlling for mediating variable. *p = .05, ** p = .01

Hypothesis 1c

Hypothesis 1c suggested that living a calling would fully mediate the relationship between presence of calling and positive vocational variables and positive well-being variables. Living a calling was assessed as a potential mediator between presence of calling and presence of meaning. In the first model, presence of meaning was regressed on presence of calling, which was found to be a significant positive predictor. In the second model, living a calling was regressed on presence of calling, which was found to be a significant positive predictor of living a calling. The third model, in which presence of meaning was regressed on presence of calling and living a calling, showed both presence of calling and living a calling as significant positive predictors of meaning in life. Statistics are found in Table 4 and Figure 6. Results of a Sobel test determined that the indirect effect of .24 was significant ($p < .001$). Bootstrapping analysis was conducted to determine the significance and intensity of the indirect effect. If the 95% confidence interval did not include zero, it was concluded that the indirect effect was significant at the $p < .05$ level (Shrout et. al., 2002). 5000 bootstrap samples were drawn, and the 95% bias-corrected interval suggested that the indirect effect did not include zero, 95% CI [.12,.41]. The

ratio of the indirect effect (.24) to the effect of presence of calling on presence of meaning in life (.78) suggested that 31% of the observed effect of presence of calling on presence of meaning was accounted for by living a calling.

Table 4
Living a Calling as a Mediator Between Presence of Calling and Presence of Meaning

Model and Variable	*b*	*SE(b)*	*β*	t	95% CI		R^2
					Lower	Upper	
Model 1: Criterion Variable: Presence of Meaning							
Presence of Calling	0.78	0.12	0.38	6.49***	0.54	1.02	0.14
Model 2: Criterion Variable: Living a Calling							
Presence of Calling	1.2	0.17	0.41	7.26***	0.87	1.52	0.17
Model 3: Criterion Variable: Presence of Meaning							
Presence of Calling	0.54	0.13	0.26	5.46***	0.29	0.79	
Living a Calling	0.24	0.04	0.28	4.59***	0.12	0.28	0.21

* $p < .05$, ** $p < .01$, *** $p < .001$.

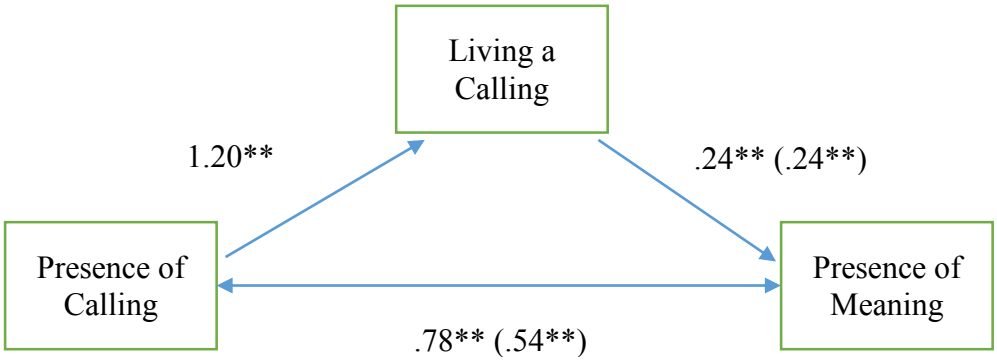

Figure 6. Living a calling as a mediator between presence of calling and presence of meaning. Numbers in parenthesis represent indirect effect of the mediator and direct effect of predictor on criterion variable after controlling for mediating variable.*p = .05, ** p = .01

Living a calling was investigated as a potential mediator between Presence of Calling and Satisfaction with Life. In the first model, satisfaction with life was regressed on presence of

calling. In the second model, living a calling was regressed on presence of calling. In the third model, Life Satisfaction was regressed on presence of calling and living a calling, showed both presence of calling and living a calling as significant positive predictors of meaning in life. Results from these models can be found in Table 5 and Figure 7. Results of a Sobel test determined that the indirect effect was significant (p =.05). Bootstrapping analysis was conducted to determine the significance and intensity of the indirect effect. If the 95% confidence interval did not include zero, it was concluded that the indirect effect was significant at the $p < .05$ level (Shrout et. al., 2002). 5000 bootstrap samples were drawn, and the 95% bias-corrected interval suggested that the indirect effect included zero, 95% CI [-.01, .29]. Therefore, living a calling was not a significant mediator of the relationship between presence of calling and life satisfaction.

Table 5
Living a Calling as a Mediator Between Presence of Calling and Life Satisfaction

Model and Variable	*B*	*SE(b)*	*β*	t	95% CI		R^2
					Lower	Upper	
Model 1: Criterion Variable: Life Satisfaction							
Presence of Calling	0.30	0.13	0.14	2.24*	0.04	0.56	0.02
Model 2: Criterion Variable: Living a Calling							
Presence of Calling	1.2	0.17	0.41	7.26***	0.87	1.52	0.17
Model 3: Criterion Variable: Life Satisfaction							
Presence of Calling	0.17	0.15	0.08	1.20	-0.14	0.48	
Living a Calling	0.10	0.05	0.14	2.07*	0.12	0.28	0.04

* $p < .05$, ** $p < .01$, *** $p < .001$.

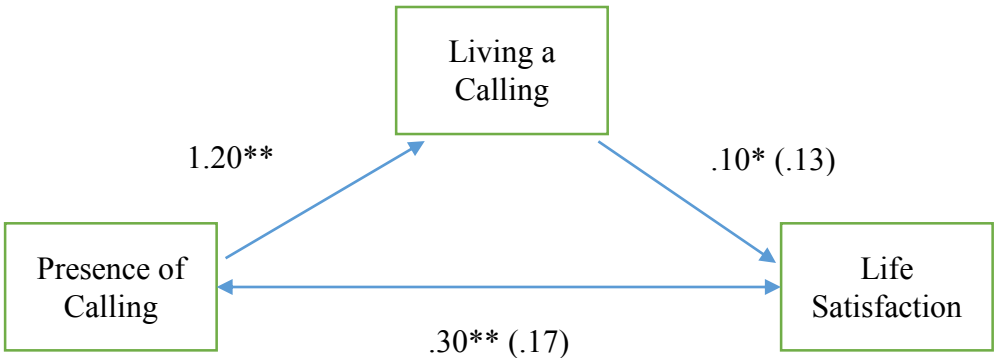

Figure 7. Living a calling as a mediator between presence of calling and life satisfaction. Numbers in parenthesis represent indirect effect of the mediator and direct effect of predictor on criterion variable after controlling for mediating variable. *p = .05, ** p = .01

Living a calling was also assessed as a potential mediator between presence of calling and academic satisfaction using multiple linear regression. In the first regression model, academic satisfaction was regressed on presence of calling. In the second model, living a calling was regressed on presence of calling, and in the third model, academic satisfaction was regressed on presence of calling and living a calling. Statistics for these analyses are found in Table 6 and Figure 8. Results of a Sobel test determined that the indirect effect of .01 was not significant (*p* =.10).

Table 6
Living a Calling as a Mediator Between Presence of Calling and Academic Satisfaction

Model and Variable	*b*	*SE(b)*	*β*	t	95% CI		R^2
					Lower	Upper	
Model 1: Criterion Variable: Academic Satisfaction							
Presence of Calling	0.20	0.1	0.12	1.93	-0.01	0.41	0.01
Model 2: Criterion Variable: Living a Calling							
Presence of Calling	1.2	0.17	0.41	7.26***	0.87	1.52	0.17
Model 3: Criterion Variable: Academic Satisfaction							
Presence of Calling	0.21	0.11	0.12	1.85	-0.01	0.44	
Living a Calling	-0.01	0.04	-0.02	0.24	-0.09	0.07	0.01

* $p < .05$, ** $p < .01$, *** $p < .001$.

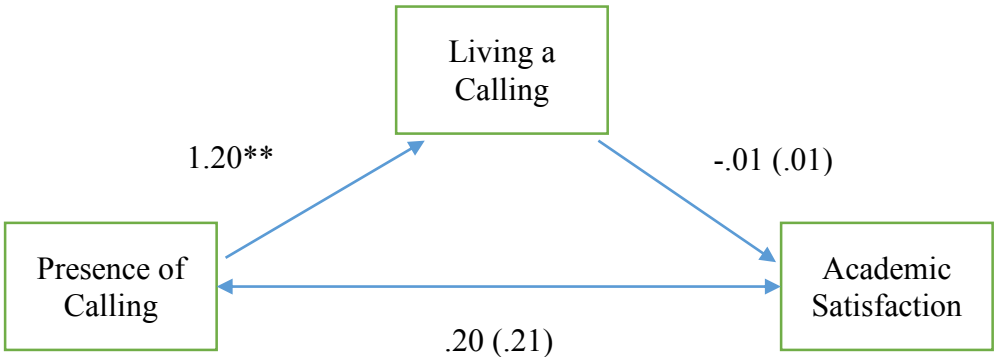

Figure 8. Living a calling as a mediator between presence of calling and academic satisfaction. Numbers in parenthesis represent indirect effect of the mediator and direct effect of predictor on criterion variable after controlling for mediating variable. *p = .05, ** p = .01

Multiple Linear Regression was used to assess living a calling as a mediator between presence of calling and work hope. Regression results can be found in Table 7 and Figure 9. Results of a Sobel test suggested that the indirect effect of living a calling on the relationship between presence of calling and work hope was not significant ($p = .08$).

Table 7

Living a Calling as a Mediator Between Presence of Calling and Work Hope

Model and Variable	*b*	*SE(b)*	*β*	t	95% CI		R^2
					Lower	Upper	
Model 1: Criterion Variable: Work Hope							
Presence of Calling	0.34	0.09	0.23	3.72***	0.16	0.51	0.05
Model 2: Criterion Variable: Living a Calling							
Presence of Calling	1.2	0.17	0.41	7.26***	0.87	1.52	0.17
Model 3: Criterion Variable: Work Hope							
Presence of Calling	0.26	0.1	0.18	2.65**	0.07	0.45	
Living a Calling	0.06	0.03	0.12	1.84	-0.01	0.13	0.06

* $p < .05$, ** $P < .01$, *** $p < .001$.

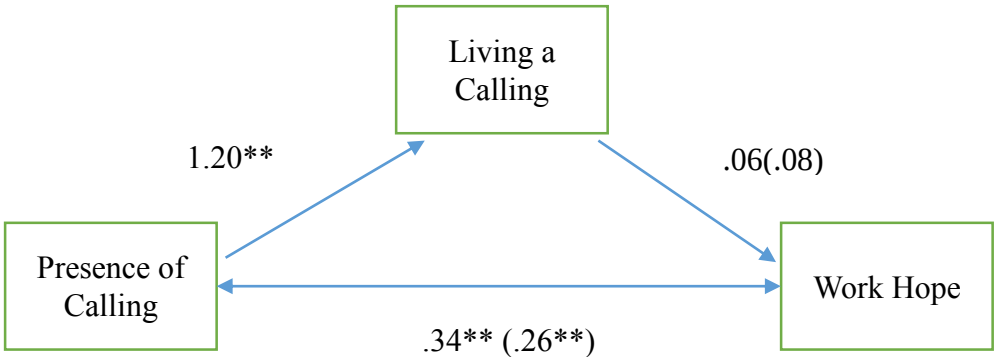

Figure 9. Living a calling as a mediator between presence of calling and work hope. Numbers in parenthesis represent indirect effect of the mediator and direct effect of predictor on criterion variable after controlling for mediating variable. *p = .05, ** p = .01

Multiple Linear Regression was used to assess living a calling as a mediator between presence of calling and vocational identity achievement. Regression results can be found on Table 8 and Figure 10. Results of a Sobel test suggested that the indirect effect of living a calling on the relationship between presence of calling and vocational identity achievement was not significant ($p = .50$). There was mixed support for this hypothesis, although it was mostly unsupported.

Table 8

Living a Calling as a Mediator Between Presence of Calling and Vocational Identity Achievement

Model and Variable	*b*	*SE(b)*	*β*	t	95% CI		R^2
					Lower	Upper	
Model 1: Criterion Variable: Vocational Identity Achievement							
Presence of Calling	0.08	0.02	0.28	4.74**	0.04	0.11	0.08
Model 2: Criterion Variable: Living a Calling							
Presence of Calling	0.91	0.07	0.62	12.74***	0.77	1.05	0.39
Model 3: Criterion Variable: Vocational Identity Achievement							
Presence of Calling	0.07	0.02	0.25	3.28**	0.03	0.11	
Living a Calling	0.01	0.01	0.05	0.68	-0.02	0.04	0.08

* $p < .05$, ** $P < .01$, *** $p < .001$.

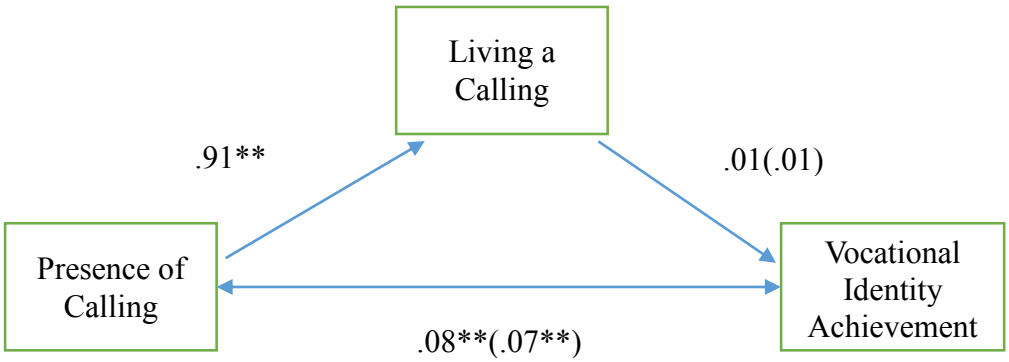

Figure 10. Living a calling as a mediator between presence of calling and vocational identity achievement. Numbers in parenthesis represent indirect effect of the mediator and direct effect of predictor on criterion variable after controlling for mediating variable.*p = .05, ** p = .01

Hypothesis 2a

Hypothesis 2a stated that personal growth initiative would moderate the relationship between presence of calling and living a calling. Hierarchical multiple linear regression was utilized to test the effects of personal growth initiative as a moderator of several variables. Before moderation analysis was conducted, the mean was subtracted from each independent

variable and moderating variable so that scores on each were centered. These variables were then multiplied to assess the impact of the interaction on the regression model. In the first model, living a calling was regressed on presence of calling and PGI. In the second step model, the interaction term was added. The results of the analysis can be found in Table 9 and Figure 11. The interaction term was significant and the overall model was significant. The interaction was probed by re-centering the moderator one standard deviation above the mean and one standard deviation below the mean. There was a stronger relationship between presence of calling and living a calling when PGI was centered one standard deviation above the mean (b = 1.52 *SE(b)* = .23, β = .52, t = 6.64, p < .001, 95% CI [1.07, 2.00]) than when it was centered one standard deviation below the mean calling (b = .61 *SE(b)* = .24, β = .21, t = 2.51, p = .013, 95% CI [.13, 1.10]), suggesting that the relationship between presence of calling and living a calling is stronger among individuals high in personal growth initiative. Therefore, this hypothesis was supported.

Table 9
PGI as a Moderator of the Relationship Between Presence of Calling and Living a Calling

Step and Variable	*b*	*SE(b)*	*β*	t	95% CI		R^2	ΔR^2
					Lower	Upper		
Step1								
Presence of Calling	1.10	0.18	0.39	6.17***	0.75	1.44		
Personal Growth Initiative	0.19	0.12	0.10	1.51	-0.06	0.43	0.13	
Step 2								
PGI*CVQ-P	0.57	0.20	0.16	2.86**	0.18	0.96	0.15	0.02

* p < .05, ** p <.01, *** p < .001.
PGI = Personal Growth Initiative, CVQ-P = Presence of Calling

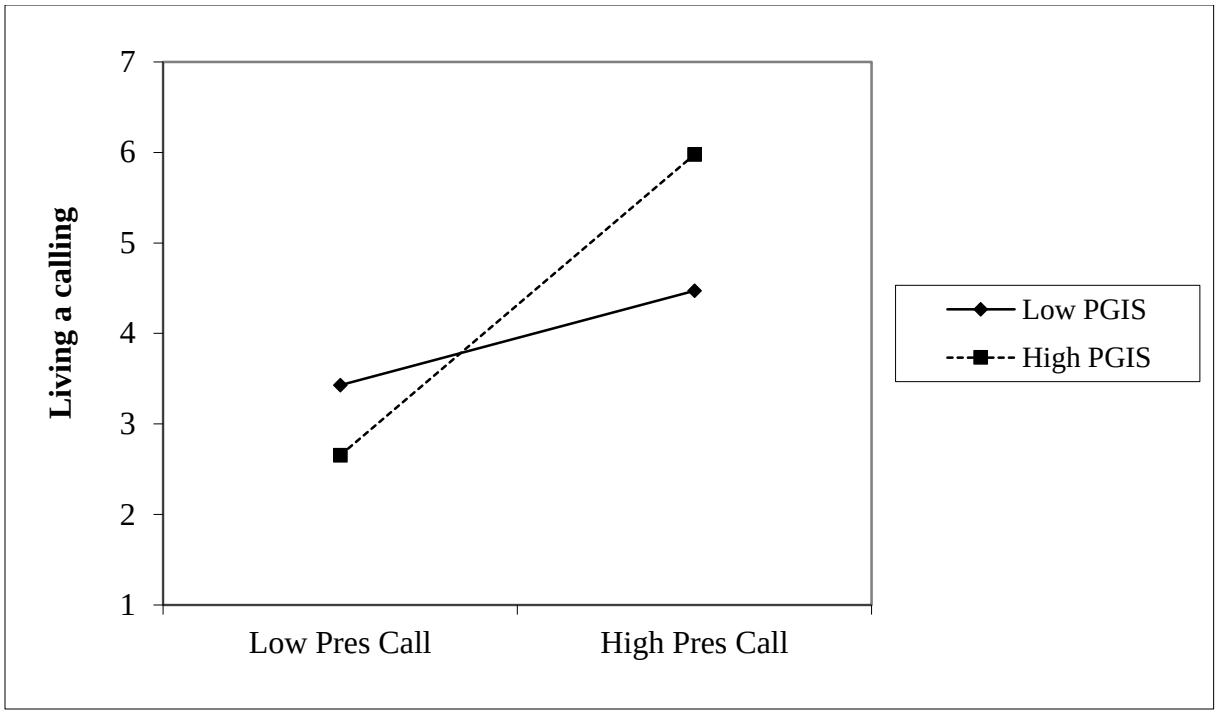

Figure 11. Interaction of Relationship Between Presence of Calling and Living of Calling by PGI

Hypothesis 2b

Hypothesis 2b suggested that personal growth initiative would moderate the relationship between presence of calling and positive well-being and occupational outcomes. Multiple Linear Regression was used to assess personal growth initiative as a moderator of the relationship between presence of calling and meaning in life, suggesting that PGI is not a moderator between presence of calling and meaning in life. Results from this analysis can found in Table 10.

Table 10
PGI as a Moderator of the Relationship Between Presence of Calling and Meaning in Life

Step and Variable	*b*	*SE(b)*	*β*	t	95% CI		R^2	ΔR^2
					Lower	Upper		
Step1								
Presence of Calling	0.64	0.12	0.31	5.40***	0.41	0.87		
Personal Growth Initiative	0.34	0.09	0.23	4.00***	0.17	0.51	0.206	
Step 2								
CVQ-P*PGI	0.12	0.13	0.05	0.86	-0.15	0.38	0.204	0.002

* $p < .05$, ** $p < .01$, *** $p < .001$.
PGI = Personal Growth Initiative, CVQ-P = Presence of Calling

PGI also was assessed as a potential moderator between presence of calling and life satisfaction. The interaction term was not significant, suggesting that PGI does not moderate the relationship between presence of calling and life satisfaction (see Table 11).

Table 11
PGI as a Moderator of the Relationship Between Presence of Calling and Life Satisfaction

Step and Variable	*b*	*SE(b)*	*β*	t	95% CI		R^2	ΔR^2
					Lower	Upper		
Step1								
Presence of Calling	-0.09	0.12	0.04	0.75	-0.32	0.14		
Personal Growth Initiative	0.67	0.09	0.45	7.84***	0.5	0.84	0.19	
Step 2								
CVQ-P*PGI	0.01	0.13	0.01	0.09	-0.25	0.28	0.19	0.009

* $p < .05$, ** $p < .01$, *** $p < .001$.
PGI = Personal Growth Initiative, CVQ-P = Presence of Calling

PGI was not a significant moderator of the relationship between presence of calling and academic satisfaction, as the interaction term was not significant in this multiple linear regression analysis. Regression statistics can be found in Table 12.

Table 12
PGI as a Moderator of the Relationship Between Presence of Calling and Academic Satisfaction

Step and Variable	*b*	*SE(b)*	*β*	t	95% CI		R^2	ΔR^2
					Lower	Upper		
Step1								
Presence of Calling	0.13	0.1	0.08	1.27	-0.07	0.32		
Personal Growth Initiative	0.12	0.07	0.11	1.71	-0.02	0.17	0.03	
Step 2								
CVQ-P*PGI	0.11	0.12	0.06	0.94	-0.12	0.33	0.03	0

* $p < .05$, ** $p < .01$, *** $p < .001$.
PGI = Personal Growth Initiative, CVQ-P = Presence of Calling

PGI was assessed as a moderator of the relationship between presence of calling and work hope. The interaction term was not significant, and results can be found in Table 13.

Table 13
PGI as a Moderator of the Relationship Between Presence of Calling and Work Hope

Step and Variable	*b*	*SE(b)*	*β*	t	95% CI		R^2	ΔR^2
					Lower	Upper		
Step1								
Presence of Calling	0.08	0.08	0.06	0.98	-0.08	0.24		
Personal Growth Initiative	0.43	0.06	0.42	7.42***	0.31	0.54	0.20	
Step 2								
CVQ-P*PGI	0.02	0.09	0.01	0.18	-0.20	0.16	0.20	0.00

* $p < .05$, ** $p < .01$, *** $p < .001$.
PGI = Personal Growth Initiative, CVQ-P = Presence of Calling

PGI was assessed as a moderator of the relationship between presence of calling and vocational identity achievement. The interaction term was not significant. Regression results can be found in Table 14. Therefore, this hypothesis was not supported.

Table 14
PGI as a Moderator of the Relationship Between Presence of Calling and Vocational Identity Achievement

Step and Variable	*b*	*SE(b)*	*β*	t	95% CI		R^2	ΔR^2
					Lower	Upper		
Step1								
Presence of Calling	0.01	0.03	-0.01	0.13	-0.07	0.06		
Personal Growth Initiative	0.07	0.02	0.18	2.93**	0.02	0.11	0.03	
Step 2								
CVQ-P*PGI	0.06	0.04	0.1	1.74	-0.01	0.13	0.04	0.01

* $p < .05$, ** $p < .01$
PGI = Personal Growth Initiative, CVQ-P = Presence of Calling

Hypothesis 3a

Hypothesis 3a stated that personal growth initiative would mediate the relationship between presence of calling and living a calling. In the first model, presence of calling was a significant predictor of living a calling and in the second model, presence of calling was a significant predictor of personal growth initiative. In the third model, presence of calling was a significant predictor of living a calling but personal growth initiative was not. Regression results can be found in table 15 and Figure 12. Results from a Sobel test suggested that the indirect effect was not significant ($p = .63$). Therefore, hypothesis 3a was not supported

Table 15

PGI as a Mediator Between Presence of Calling and Living a Calling

Model and Variable	*b*	*SE(b)*	*β*	t	95% CI		R^2
					Lower	Upper	
Model 1: Criterion Variable: Living a Calling							
Presence of Calling	1.20	0.17	0.41	7.26***	0.87	1.52	0.17
Model 2: Criterion Variable: Personal Growth Initiative							
Presence of Calling	0.54	0.08	0.40	6.55***	0.40	0.71	0.16
Model 3: Criterion Variable: Living a Calling							
Presence of Calling	1.10	0.18	0.39	6.17***	0.75	1.45	
Personal Growth Initiative	0.19	0.12	0.09	1.51	-0.06	0.43	0.18

* $p < .05$, ** $P < .01$, *** $p < .001$.

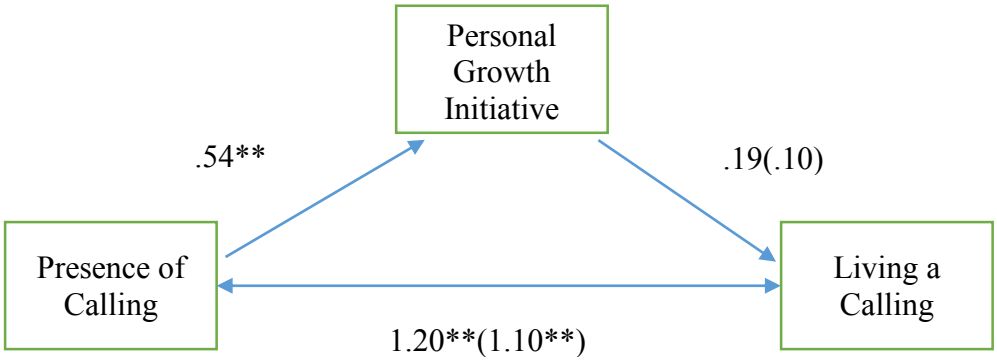

Figure 12. Personal growth initiative as a mediator between presence of calling and living a calling. Numbers in parenthesis represent indirect effect of the mediator and direct effect of predictor on criterion variables after controlling for mediating variable.*p = .05, ** p = .01

Hypothesis 3b

Hypothesis 3b stated that personal growth initiative would mediate the relationship between presence of calling and positive well-being and occupational outcome variables. Personal Growth Initiative was assessed as a mediator between presence of calling and presence of meaning in life. Presence of calling was a positive and significant predictor of meaning in life in the first model and a positive and significant predictor of personal growth initiative in the

second model. In the third model, presence of calling and personal growth initiative were both associated with presence of meaning. Regression statistics can be found in table 16 and figure 13. The indirect effect was estimated to be .19 and the results of a Sobel test suggested that the indirect effect was significant ($p < .001$). Bootstrapping analysis was conducted to determine the significance and intensity of the indirect effect. If the 95% confidence interval did not include zero, it was concluded that the indirect effect was significant at the $p < .05$ level (Shrout et. al., 2002). 5000 bootstrap samples were drawn, and the 95% bias-corrected interval suggested that the indirect effect did not include zero, 95% CI [.08,.31]. The ratio of the indirect effect (.19) to the effect of presence of calling on presence of meaning in life (.83) suggested that 23% of the observed effect of presence of calling on presence of meaning was accounted for by personal growth initiative.

Table 16
PGI as a Mediator Between Presence of Calling and Presence of Meaning

Model and Variable	*b*	*SE(b)*	*β*	t	95% CI		R^2
					Lower	Upper	
Model 1: Criterion Variable: Presence of Meaning							
Presence of Calling	0.83	0.11	0.40	7.52***	0.61	1.04	0.16
Model 2: Criterion Variable: Personal Growth Initiative							
Presence of Calling	0.55	0.07	0.40	7.51***	0.41	0.70	0.16
Model 3: Criterion Variable: Presence of Meaning							
Presence of Calling	0.64	0.12	0.31	5.46***	0.41	0.87	
Personal Growth Initiative	0.34	0.09	0.23	4.00***	0.17	0.51	0.20

* $p < .05$, ** $P < .01$, *** $p < .001$.

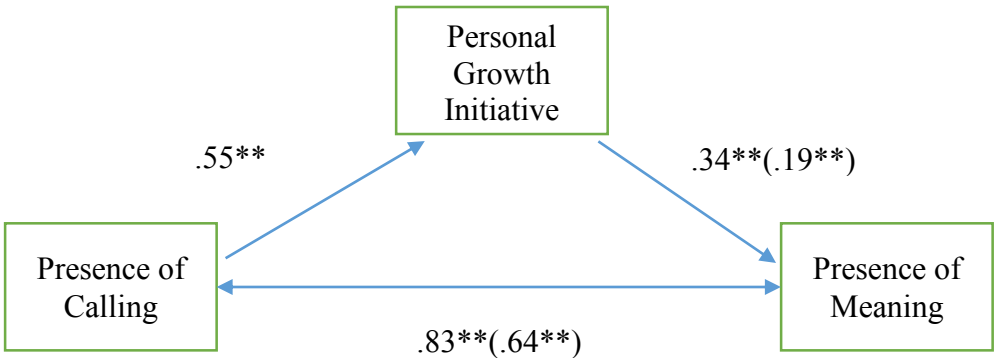

Figure 13. Personal growth initiative as a mediator between presence of calling and presence of meaning. Numbers in parenthesis represent indirect effect of the mediator and direct effect of predictor on criterion variable after controlling for mediating variable. *p = .05, ** p = .01

Personal Growth Initiative was assessed as a mediator between presence of calling and life satisfaction. Presence of calling was a positive and significant predictor of life satisfaction in the first model and a positive and significant predictor of personal growth initiative in the second model. In the third model, presence of calling was not significantly associated with life satisfaction but personal growth initiative was significantly positive associated with life satisfaction. Regression statistics can be found in table 17 and figure 14. The indirect effect was estimated to be .37 and the results of a Sobel test suggested that the indirect effect was significant ($p < .001$). 5000 bootstrap samples were drawn, and the 95% bias-corrected interval suggested that the indirect effect was different from zero, 95% CI [.25, .53]. The ratio of the indirect effect (.37) to the effect of presence of calling on presence of meaning in life (.28) suggesting that personal growth initiative fully mediated the observed effect of presence of calling on life satisfaction. Therefore, this part of the hypothesis was supported.

Table 17

PGI as a Mediator Between Presence of Calling and Life Satisfaction

Model and Variable	*b*	*SE(b)*	*β*	t	95% CI		R^2
					Lower	Upper	
Model 1: Criterion Variable: Life Satisfaction							
Presence of Calling	0.28	0.12	0.14	2.38*	0.05	0.51	0.02
Model 2: Criterion Variable: Personal Growth Initiative							
Presence of Calling	0.55	0.07	0.4	7.51***	0.41	0.70	0.16
Model 3: Criterion Variable: Life Satisfaction							
Presence of Calling	-0.09	0.12	-0.04	0.74	-0.32	0.14	
Personal Growth Initiative	0.67	0.09	0.45	7.84***	0.50	0.84	0.19

* $p < .05$, ** $P < .01$, *** $p < .001$.

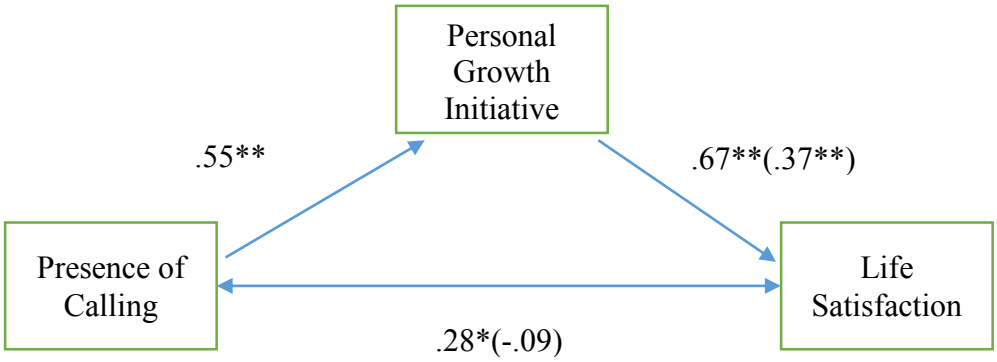

Figure 14. Personal growth initiative as a mediator between presence of calling and life satisfaction. Numbers in parenthesis represent indirect effect of the mediator and direct effect of predictor on criterion variable after controlling for mediating variable. *p = .05, ** p = .01

Personal Growth Initiative was assessed as a mediator between presence of calling and academic satisfaction. Presence of calling was a significant predictor of academic satisfaction and a positive and significant predictor of personal growth initiative. In the third model, neither presence of calling nor Personal Growth Initiative was significantly associated with academic satisfaction. Results can be found in table 18 and figure 15. The indirect effect was estimated to

be .07 and the results of a Sobel test suggested that the indirect effect was not significant (p = .10). Therefore, this part of the hypothesis was not supported.

Table 18
PGI as a Mediator Between Presence of Calling and Academic Satisfaction

Model and Variable	*b*	*SE(b)*	*β*	t	95% CI		R^2
					Lower	Upper	
Model 1: Criterion Variable: Academic Satisfaction							
Presence of Calling	0.20	0.09	0.12	2.12*	0.01	0.38	0.20
Model 2: Criterion Variable: Personal Growth Initiative							
Presence of Calling	0.55	0.07	0.40	7.51***	0.41	0.70	0.16
Model 3: Criterion Variable: Academic Satisfaction							
Presence of Calling	0.13	0.10	0.08	1.27	-0.07	0.32	
Personal Growth Initiative	0.12	0.07	0.11	1.71	-0.02	0.27	0.03

* p < .05, ** P <.01, *** p <.001.

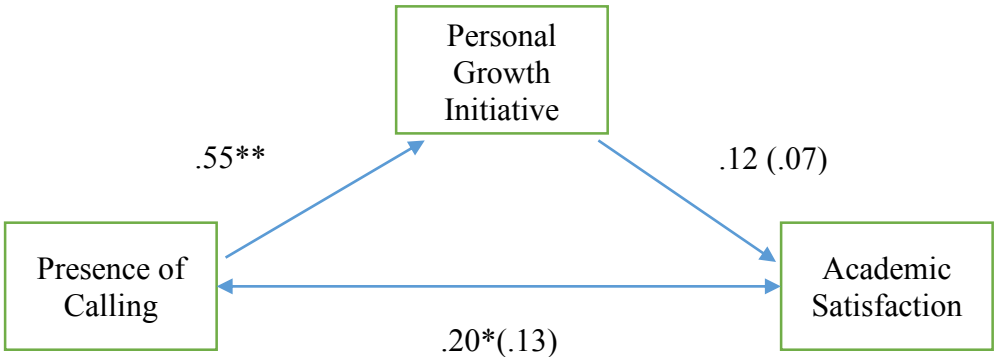

Figure 15. Personal growth initiative as a mediator between presence of calling and academic satisfaction. Numbers in parenthesis represent indirect effect of the mediator and direct effect of predictor on criterion variable after controlling for mediating variable. *p = .05, ** p = .01

Personal Growth Initiative also was assessed as a mediator between presence of calling and work hope. Presence of calling was a significant predictor of work and a positive and significant predictor of personal growth initiative. In the third model, presence of calling was not

significantly associated with work hope but personal growth initiative was significantly positively associated with work hope. Detailed regression results can be found in table 19 and figure 15. The indirect effect was estimated to be .24 and the results of a Sobel test suggested that the indirect effect was significant ($p < .001$). 5000 bootstrap samples were drawn, and the 95% bias-corrected interval suggested that the indirect effect was different from zero, 95% CI [.16, .34]. The ratio of the indirect effect (.24) to the effect of presence of calling on work hope (.31) suggested that personal growth initiative accounted for 77% of the observed effect of presence of calling on work hope.

Table 19
Personal Growth Initiative as a Mediator Between Presence of Calling and Work Hope

Model and Variable	*b*	*SE(b)*	*β*	t	95% CI		R^2
					Lower	Upper	
Model 1: Criterion Variable: Work Hope							
Presence of Calling	0.31	0.08	0.23	3.96***	0.16	0.47	0.05
Model 2: Criterion Variable: Personal Growth Initiative							
Presence of Calling	0.55	0.07	0.40	7.51***	0.41	0.70	0.16
Model 3: Criterion Variable: Work Hope							
Presence of Calling	0.08	0.08	0.06	0.98	-0.08	0.24	
Personal Growth Initiative	0.43	0.06	0.42	7.41***	0.31	0.54	0.20

* $p < .05$, ** $P < .01$, *** $p < .001$.

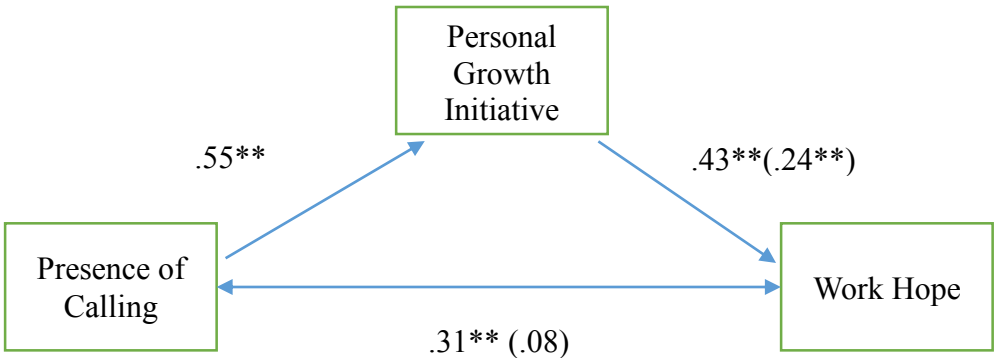

Figure 16. Personal growth initiative as a mediator between presence of calling and work hope. Numbers in parenthesis represent indirect effect of the mediator and direct effect of predictor on criterion variable after controlling for mediating variable. *p = .05, ** p = .01

Personal Growth Initiative was assessed as a mediator between presence of calling and vocational identity achievement. Presence of calling was a significant predictor of vocational identity achievement in the first model. Presence of calling was a significant positive predictor of personal growth initiative. In the third model, presence of calling was significantly associated with vocational identity achievement, but personal growth was not. These results can be found in table 20 and figure 17. The indirect effect was estimated to be .01 and the results of a Sobel test suggested that the indirect effect was not significant (p = .12).

Table 20
PGI as a Mediator Between Presence of Calling and Vocational Identity Achievement

Model and Variable	*b*	*SE(b)*	*β*	t	95% CI		R^2
					Lower	Upper	
Model 1: Criterion Variable: Vocational Identity Achievement							
Presence of Calling	0.06	0.01	0.25	4.48***	0.04	0.10	0.06
Model 2: Criterion Variable: Personal Growth Initiative							
Presence of Calling	0.27	0.04	0.39	7.23***	0.20	0.35	0.15
Model 3: Criterion Variable: Vocational Identity Achievement							
Presence of Calling	0.05	0.02	0.22	3.52***	0.02	0.09	
Personal Growth Initiative	0.04	0.02	0.10	1.59	-0.01	0.08	0.07

* $p < .05$, ** $p < .01$, *** $p < .001$.

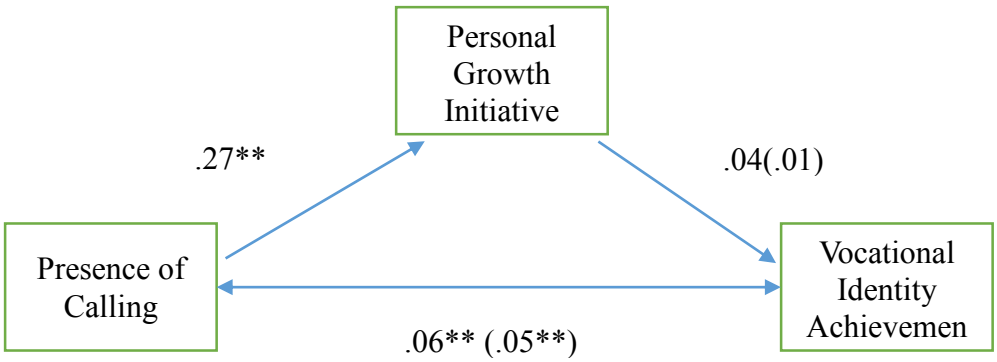

Figure 17. Personal growth initiative as a mediator between presence of calling and vocational identity achievement Numbers in parenthesis represent indirect effect of the mediator and direct effect of predictor on criterion variable after controlling for mediating variable. *p = .05, ** p = .01

Discussion

This study tested several theoretical models aimed at understanding how personal growth initiative can be incorporated into the prevailing model of calling and investigated how personal growth initiative and calling are associated with positive well-being and positive career development criterion variables. There was some support for the model in which personal growth initiative predicts presence of calling (hypotheses 1a & 1b), which suggests that personal growth initiative is associated with identifying a calling. However, living a calling did not mediate the relationship between presence of calling and most positive criterion variables (hypothesis 1c). This may point to problems with the concept of living a calling among college students rather than problems with PGI as a predictor of calling. Support was also found for PGI as a moderator of the relationship between presence of calling and living a calling (hypothesis 2a), with the relationship between presence of calling and living a calling being stronger as level of personal growth increases. This evidence suggests that there is a closer link between having a calling and living it out for people who are oriented to pursue their personal growth. Personal growth initiative did not emerge as a mediator between presence of calling and living a calling (hypothesis 3a), suggesting that it does not statistically account for the relationship between presence of calling and living a calling. However, PGI did mediate the relationship between presence of calling and positive well-being variables (hypothesis3b). The support for personal growth initiative in multiple parts of the calling model coincides with the conceptualization of personal growth initiative as a trait that fosters development in multiple domains (Robischek et. al., 2012), because the development towards experiencing a calling is different from the development of positive effects associated with presence of calling (Duffy et. al., 2013). These

findings suggest that personal growth initiative has a strong link to individuals identifying their calling and pursuing their calling. Finally, we created a new version of the living a calling scale by removing items from the longer version of the scale that included references to current work.

Living a calling did not account for the relationships between presence of calling and most positive criterion variables, which does not coincide with some findings from previous studies in which living a calling fully mediated the relationship between presence of calling and positive outcomes among working adults (Duffy et al., 2012b). There is evidence to suggest that living a calling is less important to college students, as Duffy et al. (2012a) found the living a calling was not strongly related to life satisfaction. The current study suggests that living a calling is not strongly related to several positive criterion variables, including life satisfaction, work hope, academic satisfaction, and vocational identity achievement. This occurred with a living a calling scale that was adapted to avoid items that included current work because current work may not relate to a sense of living a calling among college students. Although this strengthened the psychometric properties of scale scores, living a calling still failed to account for variability in scores on criterion variables. These findings suggest that living a calling among college students may be less important to psychological well-being and career development in the college student population than with working adults. Although many college students have jobs, these jobs are often dissimilar from employment they will have after they graduate, which may also lessen their sense of living a calling. For example, individuals acquiring an accounting degree may work part time in the restaurant industry during college, which is different from the employment they will likely have in the accounting field after they graduate. Furthermore, students are often required to take core curriculum courses that may not directly relate to any elements of students' sense of calling. This may lessen their perception of the benefits of living a

calling by diminishing the sense they are actually living their calling (Duffy et. al., 2012b). Developmental and vocational theories suggest that there are differences between college students and working adults which may explain the difference in importance of living a calling to these populations.

In the U.S., most individuals in the traditional college student age range are still in the process of seeking a career that coincides with their sense of identity (Arnett, 2000). This age span, known as *emerging adulthood*, seems to be conceptually and empirically distinct from adulthood, in which individuals have more crystalized self-concepts, are often in more stable relationships, and have greater work and family responsibility (Arnett, 2000). Living a calling refers to engaging in work that coincides with an individuals' sense of purpose (Duffy et. al., 2012), which may be related to a sense of self. Because adults have a stronger sense of self, they may more readily see their sense of purpose being fulfilled through their work. Therefore, the living a calling construct may be interpreted differently by college age students.

Another reason for the discrepancy between college students and the adult population may be related to differences in occupational activities. College students are primarily working to prepare themselves for a future career, making college a transitional period. Super's (1990) Life-Span, Life-Space theory of vocational development suggests that individuals experience an exploration stage during their late teens and early twenties, the age range of traditional college students. During this period, individuals are trying new roles and attempting to determine their vocational path. They do not usually experience strong commitment to a particular type of work. According to this theory, their main task is to achieve crystallization, a state have having identified one's general vocational goals. Their other task is to achieve specification, which involves is developing specific work preferences. While these developmental tasks seem highly

related to discerning a sense of calling, in which individuals discover what their sense of pro-social and meaningful work would entail (Dik & Duffy, 2009), it does not encompass living a calling, which involves active engagement in the activity to which one feels called (Duffy & Dik, 2013). According to Super's theory, it is usually not until individuals reach the establishment phase in their mid to late twenties that they identify and actualize their career preferences by working at a job that fits their self-concept. These differences also suggest that living a calling, which is related to career commitment (Duffy, Dik & Steger, 2011), is not applicable to college students in the exploration stage of vocational development.

The current living a calling construct requires a person to reference the specific work she or he is doing now, which may not reflect how living a calling functions with college students. The living a calling scale itself asks participants to refer to their current job, though the work college students are engaged in is typically different from working adults because it includes more classes that do not relate as directly to sense of living a calling when compared with paid employment. While the shortened version overcomes this potential problem, it highlights that many students may not think their current job involves a calling though they may see their college courses as preparation for what they see as their calling. It is possible that for college students, living a calling may involve a more abstract and future-oriented way of evaluating current work, because they consider current course work to contribute to their broader sense of calling by moving them closer to the career they plan to enter. Therefore, they may consider themselves to be living their calling through their active engagement in their current preparatory stage.

Personal Growth Initiative as a Predictor

Support was found for personal growth initiative as a predictor of presence of calling. Presence of calling was also found to mediate the relationship between personal growth initiative and living a calling, providing additional evidence for PGI as a predictor and fitting it conceptually into the current model of calling. This coincides with previous research linking PGI and vocational identity achievement, which is similar to presence of calling (Robitschek and Cook, 1999). It provides support for the notion that personal growth initiative can be applied to vocational settings, linking positive psychology and vocational psychology. However, living a calling did not mediate the relationship between presence of calling and positive criterion variables, suggesting that it does not help explain the benefits associated with presence of calling among college students. While this does not fit the current model that has been developed for adults, this may fit the developmental stage that college students experience.

Personal Growth Initiative as a Moderator

Personal Growth Initiative moderated the relationship between presence of calling and living a calling, which suggests that individuals who experience a presence of calling are more likely to feel they are living out their calling if they are high in personal growth initiative. This is consistent with the interpretation that personal growth initiative may help people who experience a presence of calling take active steps to live their calling.

When examining possible explanations for this moderating relationship, there are several elements of personal growth initiative that may facilitate individuals fulfilling their calling. For individuals who experience a presence of calling and the related sense of meaning, personal growth goals may coincide with career development goals. Calling is related to vocational identity achievement (Hirschi, 2011) and work centrality (Duffy et. al., 2011), suggesting that it

plays a significant role in individuals' career lives, which may explain how career goals are related to personal growth goals. Previous research has suggested that some individuals believe pursuing a calling and active self-improvement are similar (Hunter et al., 2010), providing further evidence that these goals may coincide. PGI may help individuals engage in adapting goals, which is an important part of an effective career (Savickas, 1999). Previous research suggests personal growth initiative is related to heightened goal setting behavior (Klockner & Hicks, 2008), so personal growth initiative may help individuals develop realistic short term and longer term goals to pursue their calling. In particular, the *planfulness* element of personal growth initiative may help individuals develop and adapt effective career goals, which may help individuals develop approaches to living their calling. The *intentional behavior* element of personal growth initiative may help people enact the plans that they make. This is an integral part of living a calling, because living a calling involves engaging in specific behaviors, which goes beyond attitudes or beliefs (Duffy et. al., 2012).

However, personal growth initiative did not act as a moderator between presence of calling and positive career-related or general well-being criterion variables, suggesting that it does not interact with presence of calling in a way that influences its relationship with positive outcomes. Because living a calling is strongly related to positive criterion variables for adults, it was expected that if PGI moderated the relationship between presence of calling and living a calling, it would also moderate the relationship between presence of calling and positive criterion variables. This calls in to question both living a calling for college students and PGI as a moderator.

Personal Growth Initiative as a Mediator

Personal growth initiative did not mediate the relationship between presence of calling and living a calling, suggesting that personal growth initiative does not fit into the current calling model as a mediator. Although it did not fit into a model that includes living a calling, personal growth initiative mediated the relationship among several criterion variables, which provides further evidence that there may be a different model for college students, because PGI was expected to mediate the relationship between presence of calling and living a calling if it mediated the relationship between presence of calling and positive criterion variables.

Personal Growth Initiative mediated relationships between presence of calling and well-being variables, including life satisfaction and meaning in life. PGI fully mediated the relationship between presence of calling and life satisfaction, but emerged as a partial mediator of the relationship between presence of calling and meaning in life. From a statistical perspective, PGI may be a stronger mediator between presence of calling and life satisfaction for two reasons: first, presence of calling is not as strongly related to life satisfaction as it is to life meaning, and second, personal growth initiative is more strongly related to life satisfaction than it is to presence of meaning in life. It is also possible there are more factors connecting calling to meaning-making and personal growth initiative to life satisfaction. PGI is more closely related to the eudemonic perspective of well-being (Robitschek, 2012), which is conceptually related to meaning in life. Therefore, it is surprising that PGI would emerge as a full mediator for life satisfaction, which is a hedonic well-being variable (Diener, 2000), but only a partial mediator for meaning, which is a eudemonic well-being variable (Steger & Frazier, 2005). When considering both results, personal growth initiative accounts for the relationship between presence of calling and both hedonic and eudemonic well-being criterion variables, which

coincides with previous research that has found relationships between personal growth initiative and well-being outcomes (Robitschek et. al., 2012). However, the causal assumption in mediation suggests that presence of calling would lead to PGI, which would then lead to criterion variables. It is also possible that experiencing a presence of calling would increase personal growth initiative by increasing sense of purpose in general, given that calling is related to meaning in life (Dik & Steger, 2008).

Personal growth initiative also mediated the relationship between presence of calling and work hope, which fits with prior research linking calling and personal growth initiative to hope (Shorey et. al., 2007). Personal growth initiative may include the expectation that intentional efforts to improve oneself will allow the individual to realize self-improvement, as it is related to self-efficacy (Robitschek et. al., 2012). When applied to vocational development, personal growth initiative may be closely related to the belief that efforts in the work domain will engender a career that fits with one's values. This coincides with research linking self-efficacy in work domains to positive outcomes, which is a key element of social cognitive-career theory that suggests self-efficacy is an integral part of career goals development and career performance (Lent, Brown & Hackett, 2002).

Personal growth initiative did not mediate relationships between presence of calling and two vocational outcomes: Academic Satisfaction and Vocational Identity Achievement. These findings suggest that personal growth initiative is more strongly related to holistic positive well-being outcomes rather than vocation-specific outcomes, which fits with theory that suggests personal growth initiative is related to holistic well-being across multiple domains rather than being confined to a particular area (Robitschek, 2012). However, it also suggests that PGI may

be more applicable to general measures such as life satisfaction rather than to more specific measures such as academic satisfaction.

Theoretical Implications

These findings add to the current research by providing evidence for personal growth initiative as a construct that is related to calling. This fits with Ebberwin's (2008) and Savickas' (1997) suggestion intentional growth is essential to career development. These results link active engagement with growth to meaningful, pro-social work that emanates from a transcendent summons. It suggests that an intrinsic motivation for self-improvement and a striving for betterment, which is part of the eudemonic perspective of well-being (Frederickson, 2001) and is part of optimal functioning in general (Emmons, 2003), is associated with a sense of calling, which involves intrinsic motivation towards particular work (Dik et. al., 2009). It also suggests that personal growth initiative helps account for the hedonic and eudemonic well-being associated with identifying a calling.

The results have placed PGI at multiple places in the calling model, which provides evidence that PGI is relevant to calling. However, there was statistical support for calling in conflicting places within the model, as there was evidence for PGI as a predictor and for PGI as a mediator. Although there are conceptual differences between PGI being a predictor and a mediator, both these analyses are based on correlations, which do not provide an indication of causality. It is possible that PGI and presence of calling are mutually causal, meaning that PGI leads to presence of calling and presence of calling leads to PGI. It is possible that presence of meaning leads to an increase in motivation towards self-improvement in general, which would be represented by PGI. The particular location of PGI within the calling model is further obfuscated by the presence of PGI as a moderator between presence of calling and living a calling, which

would place PGI in another location within the calling model. Although it is clear that intentional self-improvement is related to calling, the mechanisms through which intentional growth impacts calling are still unclear. These issues highlight the need for longitudinal research in this area. Despite this lack of clarity, there are many practical implications of the possibilities raised by these findings.

Practical Implications

These results highlight the importance of personal growth initiative in the context of calling. It may be important to assess levels of personal growth initiative in career counseling settings for several reasons. Personal growth initiative may help individuals develop a sense of calling because individuals who experience personal growth initiative may be more likely to experience a calling. Individuals who are higher in personal growth initiative may be more likely to examine their possibilities, as personal growth initiative is related to heightened environmental exploration, which mediated the relationship between PGI and vocational identity achievement among college students (Robistchek and Cook, 1999). This may lead students who are high in personal growth initiative to gather information about different jobs through attending career fairs, informational sessions, or by asking working professionals about their work experiences—or to be highly compliant to counselor directives to do so. PGI may also lead to greater self-reflection and introspection, which would promote student exploration of congruence between their personalities, values, and needs and the benefits afforded by particular types of work. Career counselors who notice that individuals exhibit high personal growth initiative may benefit clients by exploring their sense of meaning in work and their pro-social values, which are ways to help individuals identify and pursue a calling (Dik et. al., 2009). Given previous qualitative research connecting calling and personal growth (Hunter et. al., 2010) and the results that

suggest there is a relationship between personal growth initiative and presence of calling, exploring ways in which individuals perceive relationships between their calling and their personal growth by asking questions about how these two relate (e.g. "How does your calling relate to your desire for self-improvement") may assist clients in applying benefits from personal growth initiative to achieve a presence of calling. Personal growth initiative may aid individuals who are looking to navigate these issues and the plethora of additional questions issues related to understanding calling.

PGI may also help individuals broaden their perspective by increasing their awareness of ways in which their current activity fits with their calling. For example, it may help students recognize how knowledge gained through course work, which is a part of personal growth (Ryff, 1988), could be applicable to future work. For example, a business student writing an essay in an English class may benefit from recognizing that writing skills may help in future work activities, such as memo writing. Individuals with higher sense of personal growth initiative may be more amenable to broadening their perspective and may benefit more from altering their perspective because they may be capable of translating their different perspective into tangible behavior (e.g., increased effort as a result of sense of presence of calling), especially if they are high in the *intentional behavior* element of PGI.

Fostering personal growth initiative in career counseling may help clients learn to address the questions and overcome obstacles related to presence of calling. Because results suggest that personal growth initiative predicts presence of calling, increasing personal growth initiative may also lead to increases in presence of calling. Providing psychoeducation surrounding personal growth initiative and a growth activity has increased personal growth initiative among college students (Thoen & Robitschek, 2013). Therefore, counselors hoping to increase client's sense of

calling may be able to do so through explanations of the different aspects of personal growth initiative. They may also achieve this through working with clients to explore potential growth opportunities and by providing homework that would allow clients to engage in personal growth initiative. For example, if an individual identifies that they would like to increase their assertiveness, then vocational counselors may be able to provide homework opportunities to be assertive (e.g. Providing an opinion in class, asking an academic advisor about career opportunities) to facilitate personal growth initiative.

Based on the results identifying personal growth initiative as a moderator between presence of calling and living a calling, increasing personal growth initiative may also help individuals who are more certain of their calling but feel unsure of how to pursue their calling. This may be particularly relevant for individuals who are higher in extrinsic religiosity and tend to take a passive, "pray and wait" approach, which seems to hinder their career development (Dik & Duffy, 2009). Personal growth initiative may be particularly relevant for these individuals, as it may help them take a more active approach to career development, which is associated with several positive outcomes.

Personal Growth Initiative may help individuals seek support that may also protect against some of the negative elements of experiencing a calling, which may be particularly germane for individuals without access to counseling. These negatives, known as the "dark side" of calling, show that calling can be related to lower work and life satisfaction in certain contexts (Bunderson, 2009). Individuals with a strong sense of calling are not as likely to follow the career advice of people close to them, suggesting that they may experience lower career adaptability (Dobrow & Tosti-Kharas, 2012). The *seeking resources* element of personal growth initiative may help individuals find support and resources from family, friends, and community

members when exploring their sense of calling or attempting to fulfill their sense of calling. Individuals higher in personal growth initiative are more likely to seek psychosocial support (Klockner & Hicks, 2008). It is possible that this willingness to seek help may help prevent individuals from becoming fixated on a particular job that offers low job satisfaction or life satisfaction, which has been associated with negative outcomes (Savickas, 1997).

Limitations

A primary limitation of the present study was its cross-sectional design. Although much of the discussion included theory with suggestions of possible causal relationships, there is no evidence for causal relationships based on the findings of this study due to its cross-sectional method. This is particularly relevant given results placing PGI at multiple locations in the calling model, because there is only evidence of statistical relationships between these variables and there are no temporal or causal relationships. Therefore, longitudinal approaches should be used to determine possible causal relationships between personal growth initiative, calling variables, and positive criterion variables in this study. Another potential concern was that presence of calling when measured by the Calling and Vocational Questionnaire did not significantly correlate with Vocational Identity Achievement, which does not coincide with previous literature (Hirschi, 2011). The Brief Calling Scale, which was a significant correlate of vocational identity achievement, was used in mediation analyses with vocational identity of achievement, so interpretations should be made with this result in mind. However, the CVQ and BCS were high correlated and similar in other expected ways. This study was also exploratory in nature, which highlights the need for a confirmatory approach and the importance of replicating the presence study's results. In addition, results from this study may not be applicable to adults who are not attending a 4 year university. Caution is advised when applying these to working adults due to

differences between the college student population and the adult population (Duffy et al., 2012a, Duffy et. al., 2012b). Therefore, work-related issues found in this population may not be applicable to working adults. To address these issues, this model should be replicated with working adults to further assess differences between the college student population and the general population.

Future Directions

Because this study is the first that assesses the impact of personal growth initiative on calling variables, there are many opportunities to develop this research area. Given the questions surrounding the location of PGI within the calling model and the potential for mutual causality among presence of calling and personal growth initiative, longitudinal designs seem paramount to advancing research with PGI and calling. Because the calling model is assumed to occur over time, longitudinal studies should assess the impact of personal growth initiative on calling over time, which may be particularly relevant for college students given that many individuals make career decisions with long-standing ramifications during college. Longitudinal approaches may provide evidence for a developmental model of calling that may help explain the function of living a calling with personal growth initiative. A longitudinal approach may also provide evidence that would allow causal inferences to be made, which would more clearly place personal growth initiative within the calling model.

Future research could assess how subscales within the constructs of personal growth initiative differentially impact calling variables. Recent research examining vocational development and personal growth initiative found differences between the various aspects of personal growth initiative and vocational development (Weigold et. al., 2013). Therefore, future research should assess how different aspects of personal growth initiative function with calling.

This is also pertinent because personal growth initiative seems to impact calling in different ways at different points within current model of calling. It is possible that the *seeking resources* element of personal growth initiative may be important for identifying a calling while the *intentional behavior* element of personal growth initiative may be most important in helping people experience a sense of living a calling after they experience a presence of calling. In addition, presence of calling should be assessed as a potential mediator between PGI and positive criterion variables, given the questions surrounding living a calling among college students. This would more clearly assess PGI as a predictor of calling.

Future research should also examine the dimensions of calling and the dimension of personal growth initiative. There are many dimensions of calling which could be examined in the context of personal growth initiative, because it is possible that personal growth initiative has a stronger relationship with some elements of calling than it does with others. For example, the *seeking resources* aspect of personal growth initiative may be closely related to the pro-social element of calling, because both involve engagement with family, friends, and the community. It is also possible that the *intentional behavior* element of personal growth initiative is related to transcendent summons element of calling, because individuals who experience a sense of summons may be more motivated to actively engage in behaviors to pursue their calling. Future research should also assess the meaningful work element of calling with PGI, because PGI was only weakly related to meaning in life in this study. As such, it is possible that PGI is only weakly related to the meaningful work element of calling.

Future research should also assess how personal growth initiative and calling relate to work outcomes. Although this study found some relationships between personal growth initiative positive vocational outcomes, future research could assess how personal growth initiative acts as

a mediator or moderator between calling and additional outcomes such as meaningful work, career commitment, or job satisfaction. While calling has some ramifications for well-being in general, it is more focused on career-related outcomes because it is a variable that is related to career. In addition, future research could examine how personal growth interacts with living a calling among working adults, since living a calling seems more germane to this population.

Additional research should focus on understanding how living a calling relates to outcomes among college students and should work towards including a developmental aspect to calling theory that differentiates between the impact of calling for college students and adults. Although living a calling may not be as important to college students, future research should examine ways in which living a calling could positively impact academic or well-being outcomes. Research should be aimed at identifying difference in living a calling for college students and adults. This can be achieved by further development of effective measurement methods of living a calling among college students. Because of differences in living a calling between college students and adults, future research should focus on developing a scale that accurately assesses living a calling for college-age individuals. One potential direction would be to continue developing the shortened form of the living calling scale used in this study, since this study used a shortened form of the living a calling scale that was more strongly related to positive criterion variables. Future research should also examine how relationships between calling variables and criterion variables are different between college students and adults. For example, calling may be more related to academic satisfaction among college students but more relevant with work centrality among working adults. It is possible that future research would provide evidence for slightly different models of calling based on stage of career development.

Duffy and Dik (2013) suggest that interventions aimed at increasing a sense of calling are an important part of research on calling. Based on the findings in this study, particularly the function of personal growth initiative as a moderator of the relationship between presence of calling and living a calling, interventions aimed at increase a sense of living a calling may benefit from incorporating elements of personal growth initiative. Future research could determine if increasing personal growth initiative also increases presence of calling or living a calling. This would help explain the causal relationships between calling and personal growth initiative.

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Appendix A: Consent Form

Consent to Participate in a Research Study

Colorado State University

Personal Growth Initiative and Calling: A Pathway to Well-Being

Principal Investigator: Bryan Dik, Ph.D., Psychology, (970) 491-3235, Bryan.Dik@colostate.edu

CO-Principal Investigator: John Jurica, Psychology, BA, (970) 682-4560, Juricaj@rams.colostate.edu

WHY AM I BEING INVITED TO TAKE PART IN THIS RESEARCH? You are being asked to take part in this study because you are enrolled in a psychology course at Colorado State University.

WHO IS DOING THE STUDY? Dr. Bryan Dik, a faculty member, and John Jurica, a graduate student, will be conducting the study WHAT IS THE PURPOSE OF THIS STUDY? This study will look at individual differences in a sense of calling and in personal growth among college students. A calling is a desire to engage in a particular type of work that is meaningful and beneficial for society. These individual differences may be related to career development and well-being. The study will look at how calling and personal growth may have a positive effect on well-being and career development.

WHERE IS THE STUDY GOING TO TAKE PLACE AND HOW LONG WILL IT LAST? The study has a survey that you will be able to complete after reading this form and consenting to participate. The survey is expected to take around 1 hour. After this survey is completed, you do not need to do anything else.

WHAT WILL I BE ASKED TO DO? You are being asked to participate in a survey at your convenience, which may take up to one hour. After answering the questions, you will be given a link to a survey where you can provide your Student ID. This will allow you to receive 1 hour of research course credit. You should not participate in this study if you do not wish to share your thoughts on calling and personal growth.

WHAT ARE THE POSSIBLE RISKS AND DISCOMFORTS?

The study has minimal risks. Some of the items may ask about topics that are sensitive to you. In order to minimize this risk, you are encouraged to skip any items you find to be sensitive or which cause you any distress. It is impossible to identify all possible risks and discomforts associated with participation, but the researchers have taken all reasonable safeguards to minimize all possible but unknown risks. If for any reason you experience any stress due to participation in this study, you are invited to contact the University Counseling Center at 970-491- 6053.

ARE THERE ANY BENEFITS FROM TAKING PART IN THIS STUDY? There are no direct benefits to participation in this study. This study may help researchers understand more about how personal growth and a sense of calling are related to positive outcomes.

DO I HAVE TO TAKE PART IN THE STUDY? Your participation in this research is voluntary. If you decide to participate in the study, you may withdraw your consent and stop participating at any time without penalty or loss of benefits to which you are otherwise entitled. Additionally, should you choose to withdraw, you will not receive any penalty against your research participation requirement (i.e., it will not count as a no-show). However, in accordance with the PY research policy, you will not receive participation credit for this study. If at any point you feel that you would like to withdraw from the study, you are responsible for contacting the researchers with your name, study identification number, and University identification number so they can assure that your withdrawal is documented and no penalties are administered.

WHO WILL SEE THE INFORMATION THAT I GIVE? We will keep private all research records that identify you, to the extent allowed by law.

For this study, your answers will be separate from any personally identifying information you provide. Your personally identifying information will be completely separate from your survey responses and it will not be possible for anyone to connect personally identifying information with your survey responses. Only the research team will have access to your data. The only exceptions to this are if we are asked to share the research files for audit purposes with the CSU Institutional Review Board ethics committee, if necessary.

WILL I RECEIVE ANY COMPENSATION FOR TAKING PART IN THIS STUDY? You will receive 1 hour of research credit for participation in this study.

WHAT IF I HAVE QUESTIONS?

Before you decide whether to accept this invitation to take part in the study, please ask any questions that might come to mind now. If you have questions about the study in the future, you can contact the investigator, Bryan Dik, (970) 491-3235, Bryan.Dik@colostate.edu. You may also contact Bryan Dik if you have any questions after completing the study. If you have any questions about your rights as a volunteer in this research, contact Janell Barker, Human Research Administrator at 970-491-1655. If for any reason you experience distress due to your participation in this study, you are invited to contact the University Counseling Center at (970) 491-6053.

This consent form was approved by the CSU Institutional Review Board for the protection of human subjects in research on 12/09/2013.

By continuing you indicate you understand and consent to this study, you acknowledge that you have read the information stated and willingly consent to participation in this study. If you do not consent, please close your browser.

Appendix B: Measures Used

Q.1 Please indicate the degree to which you believe the following statements describe you, using the following scale. Please respond with your career as a whole in mind. For example, if you are currently working part time in a job that you don't consider part of your career, focus on your career as a whole and not your current job. Try not to respond merely as you think you ''should'' respond; rather, try to be as accurate and as objective as possible in evaluating yourself. If any of the questions simply do not seem relevant to you, ''1'' may be the most appropriate answer.

	1 -- Not at All True of Me	2 -- Somewhat True of Me	3 -- Mostly True of Me	4 -- Absolutely True of Me
1. I believe that I have been called to my current line of work.	❍	❍	❍	❍
2. I'm searching for my calling in my career.	❍	❍	❍	❍
3. My work helps me live out my life's purpose.	❍	❍	❍	❍
4. I am looking for work that will help me live out my life's purpose.	❍	❍	❍	❍
5. I am trying to find a career that ultimately makes the world a better place.	❍	❍	❍	❍
6. I intend to construct a career that will give my life meaning.	❍	❍	❍	❍
7. I want to find a job that meets some of society's needs.	❍	❍	❍	❍
8. I do not believe that a force beyond myself has helped guide me to my career.	❍	❍	❍	❍

9. The most important aspect of my career is its role in helping to meet the needs of others.	❍	❍	❍	❍
10. I am trying to build a career that benefits society.	❍	❍	❍	❍
11. I was drawn by something beyond myself to pursue my current line of work.	❍	❍	❍	❍
12. Making a difference for others is the primary motivation in my career.	❍	❍	❍	❍
13. I yearn for a sense of calling in my career.	❍	❍	❍	❍
14. Eventually, I hope my career will align with my purpose in life.	❍	❍	❍	❍
15. I see my career as a path to purpose in life.	❍	❍	❍	❍
16. I am looking for a job where my career clearly benefits others.	❍	❍	❍	❍
17. My work contributes to the common good.	❍	❍	❍	❍

18. I am trying to figure out what my calling is in the context of my career.	❍	❍	❍	❍
19. I'm trying to identify the area of work I was meant to pursue.	❍	❍	❍	❍
20. My career is an important part of my life's meaning.	❍	❍	❍	❍
21. I want to pursue a career that is a good fit with the reason for my existence.	❍	❍	❍	❍
22. I am always trying to evaluate how beneficial my work is to others.	❍	❍	❍	❍
23. I am pursuing my current line of work because I believe I have been called to do so.	❍	❍	❍	❍
24. I try to live out my life purpose when I am at work.	❍	❍	❍	❍

Q2 Please mark how much you agree or disagree with the following statements. Use the following scale:

	0 - Disagree Strongly	1 - Disagree Somewhat	2 - Disagree A Little	3 - Agree A Little	4 - Agree Somewhat	5 - Agree Strongly
1. I set realistic goals for what I want to change about myself.	❍	❍	❍	❍	❍	❍
2. I can tell when I am ready to make specific changes in myself.	❍	❍	❍	❍	❍	❍
3. I know how to make a realistic plan in order to change myself.	❍	❍	❍	❍	❍	❍
4. I take every opportunity to grow as it comes up.	❍	❍	❍	❍	❍	❍
5. When I try to change myself, I make a realistic plan for my personal growth.	❍	❍	❍	❍	❍	❍
6. I ask for help when I try to change myself.	❍	❍	❍	❍	❍	❍
7. I actively work to improve myself.	❍	❍	❍	❍	❍	❍

8. I figure out what I need to change about myself.	❍	❍	❍	❍	❍	❍
9. I am constantly trying to grow as a person.	❍	❍	❍	❍	❍	❍
10. I know how to set realistic goals to make changes in myself.	❍	❍	❍	❍	❍	❍
11. I know when I need to make a specific change in myself.	❍	❍	❍	❍	❍	❍
12. I use resources when I try to grow.	❍	❍	❍	❍	❍	❍
13. I know steps I can take to make intentional changes in myself.	❍	❍	❍	❍	❍	❍
14. I actively seek out help when I try to change myself.	❍	❍	❍	❍	❍	❍
15. I look for opportunities to grow as a person.	❍	❍	❍	❍	❍	❍

16. I know when it's time to change specific things about myself.	❍	❍	❍	❍	❍	❍

Q.3 Broadly speaking, a ‘‘calling’’ refers to a person’s belief that she or he is called upon (by the needs of society, by a person’s own inner potential, by God, by a Higher Power, etc.) to do a particular kind of work. The following questions assess the degree to which you see this concept as relevant to your own life and career. Please respond honestly, not according to what is socially desirable or what you feel you ‘‘ought’’ to think. Please indicate the extent to which each of the following statements currently describe you, using the following scale.

	1 -- Not true of me	2 -- Mildly True of Me	3 -- Moderately True of Me	4 -- Mostly true of me	5 -- Totally true of me
1. I have a calling to a particular kind of work.	❍	❍	❍	❍	❍
2. I have a good understanding of my calling as it applies to my career.	❍	❍	❍	❍	❍
3. I am trying to figure out my calling in my career.	❍	❍	❍	❍	❍
4. I am searching for my calling as it applies to my career.	❍	❍	❍	❍	❍

Q.4 Please answer the following items if you currently feel a calling to a particular job or line of work. Please answer using the following scale:

	1 Strongly Disagree	2	3	4	5	6	7 Strongly Agree	8 Not Applicable
1. I have regular opportunities to live out my calling.*	❍	❍	❍	❍	❍	❍	❍	❍
2. I am currently working in a job that closely aligns with my calling,	❍	❍	❍	❍	❍	❍	❍	❍
3. I am consistently living out my calling, *	❍	❍	❍	❍	❍	❍	❍	❍
4. I am currently engaging in activities that align with my calling,*	❍	❍	❍	❍	❍	❍	❍	❍
5. I am living out my calling right now in my job	❍	❍	❍	❍	❍	❍	❍	❍
6. I am working in the job to which I feel called.	❍	❍	❍	❍	❍	❍	❍	❍

Note: Items with an asterisk were used in the shortened version of the scale

Q.5 Please take a moment to think about what makes your life feel important to you. Please respond to the following statements as truthfully and accurately as you can, and also please remember that these are very subjective questions and that there are no right or wrong answers. Please answer according to the scale below:

	1. Absolutely Untrue	2. Mostly Untrue	3. Somewhat Untrue	4. Can't Say True or False	5. Somewhat True	6. Mostly True	7. Absolutely True
1. I understand my life's meaning.	❍	❍	❍	❍	❍	❍	❍
2. I am looking for something that makes my life feel meaningful.	❍	❍	❍	❍	❍	❍	❍
3. I am always looking to find my life's purpose.	❍	❍	❍	❍	❍	❍	❍
4. My life has a clear sense of purpose.	❍	❍	❍	❍	❍	❍	❍
5. I have a good sense of what makes my life meaningful.	❍	❍	❍	❍	❍	❍	❍
6. I have discovered a satisfying life purpose.	❍	❍	❍	❍	❍	❍	❍

7. I am always searching for something that makes my life feel significant.	❍	❍	❍	❍	❍	❍	❍
8. I am seeking a purpose or mission for my life.	❍	❍	❍	❍	❍	❍	❍
9. My life has no clear purpose.	❍	❍	❍	❍	❍	❍	❍
10. I am searching for meaning in my life.	❍	❍	❍	❍	❍	❍	❍

Q.6 Try to answer each of the following statements as mostly TRUE or mostly FALSE. Select the answer that best represents your present opinion. In thinking about your present job or in planning for an occupation or career:

	True	False
1. I need reassurance that I have made the right choice of occupation.	❍	❍
2. I am concerned that my present interests may change over the years.	❍	❍
3. I am uncertain about the occupations I could perform well.	❍	❍
4. I don't know what my major strengths and weaknesses are.	❍	❍
5. The jobs I can do may not pay enough to live the kind of life I want.	❍	❍
6. If I had to make an occupational choice right now, I'm afraid I would make a bad choice.	❍	❍
7. I need to find out what kind of career I should follow.	❍	❍
8. Making up my mind about a career has been a long and difficult problem for me.	❍	❍
9. I am confused about the whole problem of deciding on a career.	❍	❍
10. I am not sure that my present occupational choice or job is right for me.	❍	❍
11. I don't know enough about what workers do in various occupations.	❍	❍
12. No single occupation appeals strongly to me.	❍	❍
13. I am uncertain about which occupation I would enjoy.	❍	❍

14. I would like to increase the number of occupations I could consider.	❍	❍
15. My estimates of my abilities and talents vary a lot from year to year.	❍	❍
16. I am not sure of myself in many areas of life.	❍	❍
17. I have known what occupation I want to follow for less than one year.	❍	❍
18. I can't understand how some people can be so set about what they want to do.	❍	❍

Q. 7 Listed below are a number of statements concerning personal attitudes and traits. Read each item and decide whether the statement is true or false as it pertains to you personally.

	True	False
1. Before voting I thoroughly investigate the qualifications of all the candidates.	❍	❍
2. I never hesitate to go out of my way to help someone in trouble.	❍	❍
3. It is sometimes hard for me to go on with my work if I am not encouraged.	❍	❍
4. I have never intensely disliked anyone.	❍	❍
5. On occasion I have had doubts about my ability to succeed in life.	❍	❍
6. I sometimes feel resentful when I don't get my way.	❍	❍
7. I am always careful about my manner of dress.	❍	❍
8. My table manners at home are as good as when I eat out in a restaurant.	❍	❍
9. If I could get into a movie without paying and be sure I was not seen I would probably do it.	❍	❍
10. On a few occasions, I have given up doing something because I thought too little of my ability	❍	❍
11. I like to gossip at times.	❍	❍
12. There have been times when I felt like rebelling against people in authority even though I knew they were right.	❍	❍
13. No matter who I'm talking to, I'm always a good listener.	❍	❍
14. I can remember "playing sick" to get out of something.	❍	❍

15. There have been occasions when I took advantage of someone.	❍	❍
16. I'm always willing to admit it when I make a mistake.	❍	❍
17. I always try to practice what I preach.	❍	❍
18. I don't find it particularly difficult to get along with loud mouthed, obnoxious people.	❍	❍
19. I sometimes try to get even rather than forgive and forget.	❍	❍
20. When I don't know something I don't at all mind admitting it.	❍	❍
21. I am always courteous, even to people who are disagreeable.	❍	❍
22. At times I have really insisted on having things my own way.	❍	❍
23. There have been occasions when I felt like smashing things.	❍	❍
24. I would never think of letting someone else be punished for my wrongdoings.	❍	❍
25. I never resent being asked to return a favor.	❍	❍
26. I have never been irked when people expressed ideas very different from my own	❍	❍
27. I never make a long trip without checking the safety of my car.	❍	❍
28. There have been times when I was quite jealous of the good fortune of others.	❍	❍

29. I have almost never felt the urge to tell someone off.	❍	❍
30. I am sometimes irritated by people who ask favors of me.	❍	❍
31. I have never felt that I was punished without cause.	❍	❍
32. I sometimes think when people have a misfortune they only got what they deserved.	❍	❍
33. I have never deliberately said something that hurt someone's feelings.	❍	❍

Q. 8 Below are five statements with which you may agree or disagree. Using the 1-7 scale below, indicate your agreement with each item by choosing the approriate number. Please be open and honest in your responding.

	1 - Strongly Disgree	2 - Disagree	3 - Slightly Disgree	4 - Neither aree nor disagree	5 - Slightly agree	6 - Agree	7 - Strongly Agree
1. In most ways my life is close to ideal	❍	❍	❍	❍	❍	❍	❍
2. The conditions of my life are excellent	❍	❍	❍	❍	❍	❍	❍
3. I am satisfied with my life	❍	❍	❍	❍	❍	❍	❍
4. So far I have gotten the important things I want in life	❍	❍	❍	❍	❍	❍	❍
5. If I could live my life over, I would change almost nothing	❍	❍	❍	❍	❍	❍	❍

Q.9 The questions are intended to assess your attitudes towards your current major. Please answer honestly. Use the following scale:

	1 - Strongly DIsagree	2 – Disagree	3 - Neither Agree Nor Disagree	4 - Agree	5 - Strongly Agree
1. I often wish I hadn't gotten into this major.	❍	❍	❍	❍	❍
2. I wish I was happier with my choice of an academic major.	❍	❍	❍	❍	❍
3. I am strongly considering changing to another major.	❍	❍	❍	❍	❍
4. Overall, I am happy with the major I've chosen.	❍	❍	❍	❍	❍
5. I feel good about the major I've selected.	❍	❍	❍	❍	❍
6. I would like to talk to someone about changing my major.	❍	❍	❍	❍	❍

Q.10 Please respond honestly to the following questions not according to what is socially desirable or what you feel you ‘‘ought’’ to think. There are no right or wrong answers.

	1 -- Strongly Disagree	2	3	4	5	6	7 -- Strongly Agree
1. I have a plan for getting or maintaining a good job or career.	❍	❍	❍	❍	❍	❍	❍
2. I don't believe I will be able to find a job I enjoy.	❍	❍	❍	❍	❍	❍	❍
3. There are many ways to succeed at work.	❍	❍	❍	❍	❍	❍	❍
4. I expect to do what I really want to do at work.	❍	❍	❍	❍	❍	❍	❍
5. I doubt my ability to succeed at the things that are most important to me.	❍	❍	❍	❍	❍	❍	❍
6. I can identify many ways to find a job that I would enjoy.	❍	❍	❍	❍	❍	❍	❍
7. When I look into the future, I have a clear picture of what my work life will be like	❍	❍	❍	❍	❍	❍	❍

8. I am confident that things will work out for me in the future.	❍	❍	❍	❍	❍	❍	❍
9. It is difficult to figure out how to find a good job.	❍	❍	❍	❍	❍	❍	❍
10. My desire to stay in the community in which I live (or ultimately hope to live) makes it difficult for me to find work that I would enjoy.	❍	❍	❍	❍	❍	❍	❍
11. I have the skills and attitude needed to find and keep a meaningful job.	❍	❍	❍	❍	❍	❍	❍
12. I do not have the ability to go about getting what I want out of working life.	❍	❍	❍	❍	❍	❍	❍
13. I do not expect to find work that is personally satisfying.	❍	❍	❍	❍	❍	❍	❍

14. I can do what it takes to get the specific work I choose.	❍	❍	❍	❍	❍	❍	❍
15. My education did or will prepare me to get a good job.	❍	❍	❍	❍	❍	❍	❍
16. I believe that I am capable of meeting the work-related goals I have set for myself.	❍	❍	❍	❍	❍	❍	❍
17. I am capable of getting the training I need to do the job I want.	❍	❍	❍	❍	❍	❍	❍
18. I doubt I will be successful at finding (or keeping) a meaningful job.	❍	❍	❍	❍	❍	❍	❍
19. I know how to prepare for the kind of work I want to do.	❍	❍	❍	❍	❍	❍	❍
20. I have goals related to work that are meaningful to me.	❍	❍	❍	❍	❍	❍	❍

21. I am uncertain about my ability to reach my life goals.	❍	❍	❍	❍	❍	❍	❍
22. I have a clear understanding of what it takes to be successful at work.	❍	❍	❍	❍	❍	❍	❍
23. I have a difficult time identifying my own goals for the next five years.	❍	❍	❍	❍	❍	❍	❍
24. I think I will end up doing what I really want to do at work.	❍	❍	❍	❍	❍	❍	❍

Q.11 Please indicate your gender

- ❍ Female
- ❍ Male
- ❍ Other

Q.12 What is your race/ethnicity?

- ❍ Asian American/ Pacific Islander
- ❍ Black/ African American
- ❍ White/ European American
- ❍ Latino/Hispanic American
- ❍ American Indian/ Native American
- ❍ Other (please specify) _____

Q.13 Please indicate your university classification

- ❍ Freshman
- ❍ Sophmore
- ❍ Junior
- ❍ Senior
- ❍ Other (please specify) _____

Q.14 What is your age

Q.15 What is your University major?