

POSTTRAUMATIC GROWTH AND CAREER CALLING IN UNDERGRADUATES

by

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ABSTRACT

OLIVIA MAREN RIFFLE. Posttraumatic growth and career calling in undergraduates.
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As emerging adults, college students are beginning to craft a life narrative that provides purpose and direction, part of which is the identification and pursuit of a meaningful career. It may even include a *calling*, a sense of being summoned to a vocational role that helps others and offers purpose. Another piece of many students' narratives is trauma, which may alter one's identity and, possibly, career development. Some trauma survivors report *posttraumatic growth* (PTG), positive changes resulting from struggling with a traumatic event. PTG is associated with increased prosocial values, which may foster students' desire to contribute to others' welfare through a meaningful career. Despite its potential for guiding vocational development, PTG has not been examined as it relates to calling. The present study examined differences in calling based on past trauma; tested whether PTG predicts calling among students with trauma experience; and explored how other variables may impact PTG and calling. Undergraduate students ($N = 218$) completed online questionnaires assessing calling, PTG, and other variables. Although calling did not differ between students who reported trauma ($n = 119$) and those who did not ($n = 99$), PTG positively predicted calling among the former. In addition, religious commitment partially mediated the PTG-calling relationship. These results suggest that psychological growth from trauma may inform emerging adults' pursuit of a purposeful, fulfilling career, and that additional variables may help explain this positive effect. Future research should examine whether students explicitly and meaningfully associate their trauma experience with their calling.

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INTRODUCTION

With their first day on campus, undergraduates enter a formative developmental period for establishing the roots of a successful, meaningful adult life. The traditional college student is in the throes of *emerging adulthood*, a developmental stage occurring from approximately ages 18-25 in which one is tasked with contemplating possible future selves and how to form and assemble the pieces that comprise adult life, including relationships, a home, and a career (Arnett, 2000, 2006; Erikson, 1968; Luyckx, Lens, Smits, & Goossens, 2010; Rogers & Creed, 2011; Samuolis & Griffin, 2014; Waters, 2011). Emerging adults are expected to grapple with fundamental questions about their lives, including where they have been in the past and how this informs their future, what will give their lives coherence and meaning, and how they will achieve their desired goals—in essence, pillars of their identity (McAdams, 2013; Schwartz, Zamboanga, Luyckx, Meca, & Ritchie, 2013). The consideration of such questions and consequent identity exploration arise in adolescence with the development of abstract thinking abilities (Archer, 1982; Arnett, 2000; Krettenauer, 2005; McAdams, 2013), and emerging adulthood is the juncture at which this exploration must culminate in concrete life choices and commitments. In turn, these commitments help to transition the individual to the stability and autonomy of adulthood.

A useful lens through which to consider adolescents' identity formation is Erikson's (1959, 1968) stage model of psychosocial development across the lifespan, in which humans encounter a unique "crisis," or a particular challenge necessitating growth and maturation, at each life stage. Adolescence is characterized by the crisis of Identity versus Role Confusion, which entails the active exploration, evaluation, and selection of

values and roles that will be carried forward (Arnett, 2015; Erikson, 1968). A truly viable identity, according to Erikson, strikes a balance between uniqueness from and unity with peers and society, and is not merely an extension of caregivers' or role models' identities (e.g., parents), but rather allows the individual to make autonomous decisions that diverge from others'. Marcia (1966) conceptualized the outcome of identity formation as one of four *identity statuses* including 1) *achievement*, in which one has successfully crafted an identity that resonates with one's values and goals and to which one can maintain long-term fidelity (Kroger, 2015); 2) *moratorium*, a state of suspension or recess typified by exploration without commitment; 3) *foreclosure*, a premature and rigid commitment to an identity without allowing for autonomy and differentiation from other people; and 4) *diffusion*, in which one has entirely avoided identity commitment and enters adulthood with little aim or stability. Identity achievement is the most desirable outcome for this psychosocial stage, although as cultural shifts have led to the delay of many committal milestones signifying entry into adulthood (discussed below), moratorium is increasingly acceptable into the college years (Arnett, 2015; Mortimer, Lam, & Lee, 2015). Ultimately, late adolescents arrive at multiple role-specific selves, the differentiation of character across situations (Arnett, 2000; Diehl & Hay, 2011), and to proceed successfully, they must integrate these different aspects of their identity into a single *self-concept*, or a stable set of self-referential thoughts and feelings comprised of one's values, motivations, abilities, and beliefs (Diehl & Hay, 2011; Rosenberg, 1979; Samuolis & Griffin, 2014). This self-concept can then inform decisions and commitments moving forward.

Self-concept is fostered through the creation of a *life narrative*, in which one weaves experiences, values, beliefs, and goals into a coherent, internalized story (McAdams, 2006; McAdams, Ruetzel, & Foley, 1986). The life narrative is humans' natural tool for making sense of and finding meaning in our lives, and an ideal narrative achieves *continuity*, or the perception of one's past and present experiences as tied together by a central theme (Barclay, 1996; Bogart, 1994; McAdams, 2006). Emerging adults build and clarify their identity through narrative by contemplating how their pasts have led them to be the person they are today; in addition, they voice their goals, values, strengths, and talents by establishing personal standards and how they plan to live up to them (Blair, 2004; McAdams, 2013). The life narrative can, in turn, point them toward possibilities for utilizing their strengths and talents in service of their goals (Blair, 2004). Although a small portion of college students experience difficulty and even distress in attempting to establish a coherent self-concept and life narrative, particularly as they pertain to long-term goals (Diehl & Hay, 2011; Samuolis & Griffin, 2014), most successfully navigate these early adulthood years and craft the beginnings of a narrative that will guide them toward who they ultimately want to be (Arnett, 2007).

Career Development

A significant component of emerging adults' narratives is *career development*, the "lifelong psychological and behavioral processes and contextual influences shaping one's career" (Niles & Harris-Bowlsbey, 2013) including the integration of one's occupation with one's values and life roles (Herr, Cramer, & Niles, 2004). Super (1953, 1963) conceptualized career development as the process of identifying a strong fit between self-concept and the experiences and rewards of a given occupation (Fouad, 2007; Mortimer

et al., 2015). Career development was once considered a task appropriate for adolescents, who traditionally went into the workforce directly out of high school and assumed the trade in which their family was already established (Mortimer et al., 2015). However, an increasingly competitive and uncertain job market and the accompanying demand for postsecondary training has extended career development into emerging adulthood by increasing the duration of education and by redirecting adolescents' attention toward getting into college rather than finding a vocation (Mortimer et al., 2015). Career development is crucial for emerging adults as it facilitates financial independence and thus the achievement of other key tasks defining adult life, including leaving the parental home, establishing an independent residence, marriage, and parenthood (Mortimer et al., 2015; Shanahan, 2000). Furthermore, today's emerging adults, particularly those who choose to attend college, have high expectations for finding work that is both financially viable and a satisfying fit with their identity (Arnett, 2007; Carduner, Padak, & Reynolds, 2011). Thus, central to the modern college student's life narrative and identity is the search for and acquisition of a fulfilling career (McAdams, 2013).

Successful career development can yield lifelong flourishing and well-being, but if unsuccessful, can carry negative consequences. In a recent survey conducted by the National Career Development Association, 18-24-year-old Americans were more likely than any other age group to report needing help making career plans (Harris Interactive, 2011), and students who have made a career decision report significantly fewer depressive symptoms than those who are undecided (Rottinghaus, Jenkins, & Jantzer, 2009). Almost 60% of American working adults indicate they wish they had had more information and made a more careful decision at the beginning of the career development

process (Harris Interactive, 2011), and career uncertainty and occupational dissatisfaction are associated with psychological and physical distress in working adults (Herr, 1989), especially those who are younger and in earlier career stages (Bos, Donders, Schouteten, & Gulden, 2013). These consequences are only amplified by undertaking a new job search and career change (Locker, 1996), a real possibility for younger dissatisfied workers. To avoid these negative outcomes, it behooves college students to focus on finding a meaningful career fit.

Meaningful Work and the Calling

Humans naturally seek meaning in their lives, and work is a significant source of this meaning for many (Baumeister, 1991; Erikson, 1959; Frankl, 1959). Work is central to how we understand ourselves and craft our life narrative (Bogart, 1994; McAdams, 2006), and meaningful work allows us to behave consistently with our values, beliefs, and identities (Baumeister, 1991; Britt, Adler, & Bartone, 2001; Kahn, 1990; Shamir, 1991; Swann, Johnson, & Bosson, 2009). In seminal conceptualizations of meaningful work, Bellah, Madsen, Sullivan, Swidler, and Tipton (1985), and later Wrzesniewski, McCauley, Rozin and Schwartz (1997), distinguished between three possible attitudes, or *orientations*, toward work: as a job, a career, or a calling. While a job is seen as merely a source of income without intrinsic meaning, and a career focuses on advancement through the occupational structure, a calling contributes to the greater good and forges a connection between work and one's personally significant beliefs (Bellah et al., 1985; Berg, Grant, & Johnson, 2010; Elangovan, Pinder, & McLean, 2010; Peterson, Park, Hall, & Seligman, 2009; Wrzesniewski et al., 1997). The vocational calling is alternatively described as a sense of "duty" (Bunderson & Thompson, 2009; Coulson,

Oades, & Stoyles, 2012) or “destiny” (Hunter, Dik, & Banning, 2010) and has the potential to resolve the very existential questions that arise in adolescence and emerging adulthood, such as who one is and what one’s purpose is (Conklin, 2012; Frankl, 1959; Hagmaier & Abele, 2015).

Researchers of calling trace its roots to Protestant theologians Martin Luther (1520) and John Calvin (1574), who argued that work has little intrinsic spiritual meaning but becomes meaningful when done in the service of God and the larger community (Dik & Duffy, 2009; Lips-Wiersma, 2002; Rosso, Dekas, & Wrzesniewski, 2010; Steger, Pickering, Shin, & Dik, 2010). Many individuals today who experience a calling maintain this sense of duty from God (Steger et al., 2010). Those who report a greater sense of calling, particularly college students, also tend to endorse more religiousness, including both commitment to one’s religion and intrinsic adoption of religious values (Davidson & Caddell, 1994; Duffy & Sedlacek, 2010; Steger et al., 2010). Steger et al. (2010) suggested the religiousness-calling relationship can be linked to the search for an acquisition of meaning in life. In this way, although it emerged from a religious tradition and maintains these ties, calling can and has been conceptualized from a secular perspective. Dik and Duffy (2009) developed a secular tripartite definition of calling, including (1) a “transcendent summons” originating beyond the self, (2) an “approach to a particular life role” with the aim of deriving a sense of purpose or meaning that (3) “holds other-oriented values and goals as primary sources of motivation” (p. 427). This last component, a drive toward prosocial action, is a common theme in the calling literature (Dik & Duffy, 2009; Dik, Duffy, & Steger, 2012) and is seen as the intersection of one’s natural talents and interests and what the world needs, serving both the self and society

(Buechner, 1993; Conklin, 2012; Davidson & Caddell, 1994; Maslow, 1971). As discussed later, increased prosociality may impact career development.

Pursuit of a calling is associated with multiple general and work-related positive outcomes. Positive general outcomes include greater life satisfaction (Baumeister, 1991; French & Domene, 2010; Wrzesniewski et al., 1997), greater life meaning (Baumeister, 1991; Steger et al., 2010; Wrzesniewski, 2003), and decreased stress and depressive symptoms, increased clarity of self-concept, and increased problem-focused coping (Treadgold, 1999). Positive work-related outcomes include greater work satisfaction (Duffy & Sedlacek, 2010), work meaning (Duffy, Bott, Allan, Torrey, & Dik, 2012; Wrzesniewski, 2003), career commitment (Duffy et al., 2012), and work engagement (Hirschi, 2012), and lower absenteeism (Wrzesniewski et al., 1997) and decreased work-related stress (Elangovan et al., 2010). Notably, a distinction is made between the *presence* of a calling and the *search* for it; while the former is associated with positive outcomes, the latter has been negatively correlated with life satisfaction, self-esteem, and purpose in life (Duffy & Sedlacek, 2007a; Steger, Frazier, Oishi, & Kaler, 2006).

Calling is a salient and common experience among college students: In one survey of 5,000 students, 40% reported feeling a sense of calling to a particular career (Duffy & Sedlacek, 2010), a statistic consistent across later surveys (Duffy, Allan, & Dik, 2011), and 68% of another college sample indicated that a calling was important to acquire in the career selection process (Hunter et al., 2010). Prosocial themes seen among adults following their calling also exist among students: A significant proportion of college students report that making a contribution to society is most valued in their long-term career choice (Duffy & Sedlacek, 2007b, 2007c). What's more, prosocial activities

help foster career development: College students who engage in service learning have improved self-knowledge and vocational development; over 80% reported career development progress as a result of these activities (Simons & Cleary, 2006). Another sample of service learners reported increased self-knowledge and social awareness, and 44% indicated that volunteerism helped them choose or prepare for their career (Primavera, 1999). Students with a greater desire to serve others are more excited and optimistic about their careers (Duffy & Raque-Bogdan, 2010). This evidence suggests that calling is not only familiar and pertinent to this population but has significant implications for career development and satisfaction. A meaningful career devoted to helping others is one possible outlet for prosocial behavior (Dik, Duffy, et al., 2012), and the most sensible place to nurture this value is at the roots of career development—the college years.

Career Development and Calling in Traumatized Students

Traumatic experiences are an unfortunate commonality of human experience and can shatter fundamental assumptions about the world and one's place in it (Cann et al., 2010; Janoff-Bulman, 1992; Stanton, Bower, & Low, 2006; Tedeschi & Calhoun, 1995). These *core beliefs* form the foundation of the life narrative and identity, and to the extent that a traumatic event challenges those beliefs, the narrative must be revised to incorporate the event (Cann et al., 2010; Pals & McAdams, 2004; Tedeschi & Calhoun, 2012). Although trauma has the capacity to cause substantial psychological distress and disruption of functioning (e.g., Janoff-Bulman, 1992), some survivors experience *posttraumatic growth* (PTG), positive psychological changes that occur as a result of having struggled with a highly challenging life circumstance (Tedeschi & Calhoun, 1995;

Tedeschi & Calhoun, 1996, 2004). PTG has been demonstrated to occur over five general domains, including personal strength, improved relationships with others, a sense of new possibilities in life, a newfound appreciation of life, and heightened spirituality/religiosity (Tedeschi & Calhoun, 2004). In particular, strength of religious beliefs and commitment have been associated with PTG in numerous studies (e.g., Calhoun, Cann, Tedeschi, & McMillan, 2000; Kleim & Ehlers, 2009; Taku & Cann, 2014), and several researchers have identified religion as a potential mechanism for promoting growth through such changes as increased social support or optimism (e.g., Gerber, Boals, & Schuettler, 2011; Joseph, 2011; Pargament, Desai, & McConnell, 2006; Park & Dornelas, 2012; Thombre, Sherman, & Simonton, 2010). Although more research is still needed to clarify the exact nature of religion's role in PTG, it is apparent that this is a significant component of growth for many.

By forcing the individual to confront shattered core beliefs and revise the life narrative, traumatic events have the potential to impact and even redirect identity formation considerably. It has been demonstrated that the more disruptive an event is to one's core beliefs, the more relevant or central it becomes to one's identity (Berntsen & Rubin, 2006; Cann et al., 2010; Groleau, Calhoun, Cann, & Tedeschi, 2013; Orejuela-Davila et al., 2015). *Centrality of event* can be defined as the degree to which trauma survivors view themselves "in part, or perhaps exclusively, as someone who has experienced a traumatic event" (Groleau et al., 2013, p. 477). In turn, centrality of event is associated with transformation of self-concept through editing one's narrative (Berntsen & Rubin, 2006; Britt, 1999; Britt et al., 2001; Fitzgerald, 1988; Schlenker, Britt, Pennington, Murphy, & Doherty, 1994). Centrality of event is also positively

associated with PTG (Groleau et al., 2013), indicating that the impact of trauma on identity formation could yield positive outcomes.

One way trauma survivors might instigate and promote PTG is by crafting their life narrative as one of redemption in the wake of trauma, leading them to consider how the event led to positive changes (Calhoun & Tedeschi, 2013; McAdams, 2006, 2013; Pals, 2006; Pals & McAdams, 2004). Impactful, highly central life events often serve as “turning points” in the life narrative, functioning to alter or redirect one’s future choices, actions, and values (Baerger & McAdams, 1999; Pillemer, 2003). Forming a redemptive narrative gives meaning to a tragic event, stimulates purpose, and is associated with increased well-being (Dunlop, Walker, & Wiens, 2015; Gillies & Neimeyer, 2006; McAdams, 2013). In fact, those who have experienced adversity and developed a narrative in which they improve as a result, may be more likely to measurably improve subsequently (Dunlop & Tracy, 2013). For emerging adults, one such improvement might be the successful establishment of adult life, including a meaningful career.

PTG has been associated with many positive outcomes, including increases in prosocial values and behaviors such as volunteerism (e.g., Frazier et al., 2013; Gillen, 2005; Janoff-Bulman, 1992; McMillen & Fisher, 1998). In *altruism born of suffering*, also referred to as the “survivor mission,” those who have encountered trauma regain meaning and find resolution by using their experience to help and care for others (Eskreis-Winkler, Shulman, & Duckworth, 2014; Herman, 1992; Staub & Vollhardt, 2008; Vollhardt, 2009; Vollhardt & Staub, 2011). Indeed, increased empathy is a common occurrence among those who have experienced PTG (Tedeschi, Park, & Calhoun, 1998), particularly toward others who have experienced a similar traumatic

event (Vollhardt & Staub, 2011); in turn, empathy is closely linked to prosocial action (Eisenberg & Miller, 1987; Frazier et al., 2013). It seems that positive changes resulting from trauma lead one to see one's experience as a resource for others in need, and to feel responsibility to improve others' welfare (Staub & Vollhardt, 2008; Tedeschi et al., 1998). For instance, those who have been violently victimized are more likely to participate in civic and political activism than those who have not (Bateson, 2012), and many who have had near-death experiences find they have increased concern for, and helpfulness toward, others (Greyson, 2006) and greater empathy, compassion, and desire to serve (Flynn, 1986; Ring, 1980). In a longitudinal study of U.S. veterans, those who maintained or increased PTG over two years post-trauma were more likely to volunteer weekly and perform altruistic acts more frequently than those who did not maintain PTG (Tsai, Sippel, Mota, Southwick, & Pietrzak, 2016). A possible explanation for these behaviors may be that traumatic experiences tend to heighten the salience of one's own mortality, and by performing behaviors that contribute to society, one acquires a sense of "symbolic mortality," which provides meaning and purpose (Dunlop et al., 2015; Jonas, Schimel, Greenberg, & Pyszczynski, 2002; McAdams et al., 1986). Importantly, these existing data do not support a clear predictive relationship in one direction between PTG and prosocial values and behaviors, and therefore it may be the case that this relationship functions in a bidirectional and cyclical manner, each reinforcing the other.

Careers are possible vehicles for prosocial contribution (Dik, Duffy, et al., 2012), and these findings suggest that trauma and subsequent growth might relate to the identification of such a career. Consider the "wounded healer," a survivor of adversity or trauma who has chosen a career in a helping profession, such as mental health care.

Trauma offers a unique vantage point to a healer, in that the individual may be able to better recognize and empathize with trauma, and ultimately treat it more effectively (Black, Jeffreys, & Hartley, 1993; Cohen, 2009; Elliott & Guy, 1993; Jackson, 2001; Nouwen & Jong, 1972). For instance, a sample of female psychotherapists were more likely than women working in other professions to have experienced such traumas in childhood as physical abuse, sexual molestation, psychiatric hospitalization of a parent, and death of a family member—and, critically, these psychotherapists experienced less depression, sleep disturbance, and impairment in relationships than the other female professionals (Elliott & Guy, 1993). Mental health professionals who had firsthand parallel experience with clients' problems (e.g., diagnosed with same mental illness) evidence heightened work engagement relative to those who do not have parallel experience (Eskreis-Winkler et al., 2014). Together, this evidence suggests a potential link between facing trauma, being called to a particular career as a result of that trauma, and ultimately experiencing career fulfillment.

The Present Study

PTG and its associated changes in identity, the life narrative, and prosocial values have the potential to significantly influence one's identification of a calling and fulfilling career, and the salience of these concepts to college students makes this an important link to examine in this population. The lifetime prevalence of at least one traumatic event in college students is considerable, about 85% in multiple non-clinical samples (Frazier, Anders, et al., 2009; Vrana & Lauterbach, 1994). In turn, adolescents and college students report higher PTG than older adults (Aldwin, 2007; Danhauer et al., 2013; Manne et al., 2004; Stanton et al., 2006), perhaps because the self-exploration underlying

PTG comes most easily to emerging adults, who are already engaging actively in this process as part of normative development (Arnett, 2000; Tedeschi & Calhoun, 2012). Furthermore, several researchers have linked the discovery of calling to personal adversity and consequent reflection (Conklin, 2012; Duffy et al., 2012; French & Domene, 2010; Haney-Loehlein, McKenna, Robie, Austin, & Ecker, 2015; Hernandez, Foley, & Beitin, 2011); meaning construction and identity change seem to be inherent to the identification and following of one's calling (Conklin, 2012; Wrzesniewski, 2003). Therefore, college students who have endured a traumatic event and subsequently experienced PTG are potentially at an advantage in the early stages of career development, specifically in pursuit of a calling.

The high endorsement of calling in college students perhaps can be explained in part by growth from challenging life experiences, but past studies have not made this distinction (e.g., Duffy & Sedlacek, 2010; Hunter et al., 2010) or meaningfully linked the literatures examining calling and PTG. For this reason, it is important to determine whether sense of calling differs between undergraduates who have experienced a traumatic event and those who have not: Identity formation, creation and editing of the life narrative, and overall growth are central to emerging adulthood (Arnett, 2000, 2007; McAdams, 2013), and thus it is necessary to distinguish calling due to normative development from calling due to PTG (Tedeschi & Calhoun, 2012). In addition, centrality of event demonstrably impacts PTG and has the potential to help explain other phenomena that pertain to identity development and adjustment—such as career calling. Finally, religiousness is pertinent to both career calling and to the experience of PTG, and therefore it is important to consider as it relates to each in this population.

In order to examine these potential relationships, the following hypotheses are proposed:

H1: Students who have experienced a traumatic event will report significantly higher levels of calling than students who have not experienced a traumatic event.

H2: Among those students who have experienced a traumatic event, there will be a significant positive relationship between PTG and calling. Specifically, PTG will be significantly positively associated with the prosocial domain of calling more highly than with the other domains of calling.

H3: Among students who have experienced a traumatic event, there will be a significant positive relationship between centrality of event and calling: The greater the centrality of the traumatic event to one's identity, the more likely the individual is to report a sense of calling. Furthermore, the positive relationship between centrality and calling will be fully mediated by PTG—i.e., the positive effect of centrality on calling will be explained by increases in PTG.

H4: Among all students, there will be significant positive relationships between religious commitment and calling, and strength of religious beliefs and calling. Among students who have experienced a traumatic event, there will be significant positive relationships between religious commitment and PTG, and strength of religious beliefs and PTG. Furthermore, among students reporting trauma, religious commitment and strength of beliefs will each partially mediate the relationship between PTG and calling.

METHODS

Participants

Participants were 218 undergraduate students (113 female) at the University of North Carolina at Charlotte recruited through the university's online psychology department research subject pool. Inclusion criteria included being at least 18 years old and a native speaker of English. Participants ranged in age from 18 to 40, with a mean age of 20.21 ($SD = 3.07$). The majority of participants were White (68.8%; $n = 150$); 34 (15.6%) identified as African American, 16 (7.3%) as Multiracial, 7 (3.2%) as Asian, 2 (0.9%) as American Indian/Alaskan Native, 1 (0.5%) as Native Hawaiian/Other Pacific Islander, and 8 (3.7%) as "other." Sixteen participants (7.3%) identified as Hispanic/Latino/a, 187 (85.8%) identified as not Hispanic/Latino/a, and 15 (6.9%) did not indicate ethnicity. The sample consisted of 98 freshmen (45.0%), 57 sophomores (26.1%), 35 juniors (16.1%), and 28 seniors (12.8%).

Measures

See Appendix for copies of all measures used in this study.

Demographics. Participants reported age, gender, race, ethnicity, and class year.

Trauma checklist. Participants indicated whether they have experienced one or more traumatic events from a list of 15 events (e.g., death of loved one, physical assault). If they reported experiencing more than one event, they were asked to focus on the event that feels most unresolved for them. They were then asked to provide additional details about the event, including the length of time since the event, their perceived stressfulness of the event at the time on a 7-point Likert scale ranging from 1 = *mild* to 7 = *extremely stressful*, and their perceived stressfulness of the event at present (i.e., within the past

week). In addition to non-trauma-related items (i.e., religiousness and calling), students who endorsed a traumatic event completed trauma-related questionnaires (PTGI, CES, and others). Those who did not endorse any events completed only the non-trauma-related measures.

Posttraumatic growth. Posttraumatic growth was assessed via the Posttraumatic Growth Inventory (PTGI; Tedeschi & Calhoun, 1996). The 21-item PTGI assesses PTG across five domains: Relating to Others, New Possibilities, Personal Strength, Spiritual Change, and Appreciation of Life. For each item, individuals endorse the amount of change on a six-point Likert scale, ranging from 0 = *not at all* to 5 = *to a very great degree*. Items are summed for a total score ranging from 0 to 105, with higher scores representing a greater degree of PTG. The PTGI has demonstrated good internal consistency (Cronbach's $\alpha = .90$) and test-retest reliability ($r = .71$; Tedeschi & Calhoun, 1996).

Centrality of event. Centrality of the traumatic event was assessed via the Centrality of Events Scale (CES; Berntsen & Rubin, 2006). The 20-item CES assesses the extent to which a major negative life event is central to one's identity and life narrative. Items are measured on a five-point Likert scale ranging from 1 = *totally disagree* to 5 = *totally agree*. Items are averaged for a mean total score, and with higher total scores representing a greater degree of centrality. The CES has been demonstrated to have strong internal consistency (Cronbach's $\alpha = .94$) (Berntsen & Rubin, 2006).

Religiousness. Religiousness was assessed with the Religious Commitment Inventory (RCI-10; Worthington et al., 2003). The 10-item RCI-10 measures degree of commitment to one's religion; sample items include "My religious beliefs lie behind my

whole approach to life” and “I enjoy working in the activities of my religious organization.” Items are endorsed on a five-point scale ranging from 1 = *not at all true of me* to 5 = *totally true of me*, Total scores range from 10 to 50, higher scores indicate greater religious commitment. The RCI-10 has demonstrated high internal consistency (Cronbach’s $\alpha = .83$) (Steger et al., 2010), and data indicate that college students of various religious traditions exhibit similar norms on the RCI-10 (Worthington et al., 2003), suggesting that this scale is appropriate for both Christian and non-Christian groups. Participants were also asked to respond to a single item rating the strength of their religious beliefs (SB) on a four-point scale including 1 = *I am not religious at all*, 2 = *I am a little religious*, 3 = *I am religious*, and 4 = *I am strongly religious* (see Taku & Cann, 2014).

Career calling. Sense of calling was assessed via the Calling and Vocation Questionnaire (CVQ; Dik, Eldridge, Steger, & Duffy, 2012). The 24-item CVQ assesses the degree to which an individual experiences a sense of calling in pursuing his/her career. Items are endorsed using a 4-point scale, ranging from 0 = *not at all true of me* to 4 = *absolutely true of me*. Items are summed for a total score ranging from 0 to 96, with higher total scores indicating greater sense of calling. Items fall into six subscales (four items each): Transcendent Summons – Presence, Transcendent Summons – Search, Purposeful Work – Presence, Purposeful Work – Search, Prosocial Orientation – Presence, and Prosocial Orientation – Search; these correspond to Duffy and Dik’s (2009) tripartite definition of calling, in both the domains of presence of calling and search for calling. Internal consistency is high both across the overall Presence ($\alpha = .89$) and Search ($\alpha = .87$) scales and within each subscale (ranging from $\alpha = .83$ to $\alpha = .93$;

Dik, Eldridge, et al., 2012). Test-retest validity is fair (range of $r = .60$ to $r = .75$; Dik, Eldridge, et al., 2012).

Procedure

This study was approved by the Institutional Review Board at UNC Charlotte. Participants were recruited through the online research subject pool at UNC Charlotte and offered course credit in exchange for completing the study. Participants provided informed consent, which included a statement with contact information for the university counseling center should any student feel distressed as a result of participation. All participants completed demographic and non-trauma-related items, including the RCI, SB item, and CVQ; these measures were randomized to avoid any potential order effects. Participants also completed the trauma checklist, and participants who indicated they had experienced one or more of the traumatic events listed in the checklist completed all trauma-related questionnaires. The trauma- and non-trauma-related question blocks were randomized to avoid potential order effects.

Data Analysis

Descriptive statistics were evaluated to ensure data exhibited reasonable normality with no signs of outliers or entry error. PTGI, CES, RCI, SB, and CVQ scores were centered to reduce non-essential multicollinearity in regression analyses. Data were coded to assign each participant to one of two groups, “trauma” ($n = 119$) and “non-trauma” ($n = 99$). To qualify for the trauma group, participants must have indicated that they have experienced at least one traumatic event, and that their perceived stressfulness of the event at the time was at least a 5 on the 7-point Likert scale. This limitation, used in prior PTG research (e.g., Groleau et al., 2013) was imposed to ensure that participants

focused on an event that was subjectively highly stressful or traumatic. Using these criteria, there were 119 participants (54.6%) in the trauma group, and 99 participants (45.4%) in the non-trauma group. Among the trauma group, 50 (42%) reported the death of a loved one, 19 (16%) a loved one's serious medical illness, 11 (9.2%) being sexually assaulted, 8 (6.7%) facing serious harm or threat of death, 7 (5.9%) a personal medical illness, 6 (5%) being in a serious accident, 5 (4.2%) a loved one's serious accident, 3 (2.5%) witnessing assault, 1 (0.8%) being physically assaulted, 1 (0.8%) partner abuse, 1 causing an accident (0.8%), 1 (0.8%) being stalked, 1 (0.8%) being deployed by the military, and 5 (4.2%) other.

To determine whether students who have experienced a traumatic event reported a higher degree of calling than those who have not (H1), an ANCOVA analysis was conducted, controlling for any demographic variables that significantly differed between groups. To examine the degree to which PTG predicted calling among students in the trauma group (H2), a hierarchical multiple regression was conducted. Demographic variables as well as variables regarding the nature of the trauma (i.e., time since event, stressfulness at time of event and presently, and event type) were correlated with calling to determine whether any needed to be entered as control variables in the first step, followed by PTGI in step two. The incremental predictive validity (ΔR^2) of PTGI in predicting CVQ was examined for practical and statistical significance. Finally, to examine mediation models (H3 and H4), three path analyses were conducted using simultaneous multiple regression analyses to determine direct effects. Indirect effects were calculated and tested for significance using the bootstrapping method (Preacher & Hayes, 2004, 2008). Overall, there were 10 missing PTGI scores, 18 missing CVQ

scores, one missing CES score, and five missing RCI scores. As these missing values occurred at random (i.e., there were no patterns of missing values for particular items or participants) and comprised only 5% of total observations, they were deleted listwise in statistical analyses.

RESULTS

Data exhibited reasonable normality and adequate variability with no signs of entry error. Two outliers were identified in CVQ scores; results did not meaningfully differ when these cases were excluded, and so were removed to obey assumptions of the statistical tests used. See Table 1 for descriptive statistics and correlations among study variables. All variables were associated with one another in the expected directions.

Hypothesis 1

The trauma and non-trauma groups significantly differed in gender composition, $\chi^2(1, 218) = 9.49, p = .002$, such that the trauma group contained more females. Thus, gender was used as a control in the ANCOVA comparing CVQ between groups. No other demographic variables significantly differed between groups. After controlling for gender, CVQ did not significantly differ between groups, and therefore Hypothesis 1 was not supported.

Hypothesis 2

See Table 2 for results of the regression analysis. Among the trauma group, no trauma-related variables (i.e., stressfulness at time of event, stressfulness at present, time since event, or event type) were significantly related to CVQ. However, CVQ significantly differed between genders ($n = 111; t = -2.29, p = .02$), such that females reported significantly higher CVQ. Therefore, gender was entered as a control variable in the first step of the hierarchical multiple regression, followed by PTGI in step two. After controlling for gender, PTGI significantly impacted CVQ ($\beta = .31, p = .001$), a moderate effect size. The overall model was significant, $F(1,100) = 8.47, p < .001$, and PTGI

demonstrated significant incremental validity in predicting CVQ, explaining an additional 9.3% of variance in CVQ among trauma group participants, $F(1,99) = 10.78$ $p = .001$.

Hypothesis 3

Before conducting path analyses for H3 and H4, CVQ was residualized to control for variance due to gender. Regression analysis revealed that CES did not significantly predict CVQ, indicating that it was not appropriate to test the mediation of this relationship by PTGI.

Hypothesis 4

A path model was tested to determine whether RCI mediated the relationship between PTGI and CVQ (see Table 3 for estimated parameters). In support of the hypothesized model, RCI significantly partially mediated the relationship between PTGI and CVQ. PTG significantly influenced religious commitment ($\beta = .38$, $p < .001$), a large effect size, and calling ($\beta = .24$, $p = .02$), a moderate effect size. In turn, PTG and RCI significantly predicted CVQ; the overall model was significant, $F(2,99) = 7.696$, $p = .001$, and together these predictors accounted for 14% of the variance in calling.. Finally, religious commitment significantly impacted calling ($\beta = .20$, $p < .001$), such that higher RCI predicted higher CVQ; this was a small effect size. PTGI indirectly predicted CVQ ($\beta = .08$) through RCI; using the bootstrap method with 1,000 iterations and examining the 95% confidence interval, this indirect effect was found to be significant. Of note was a spurious effect of RCI on CVQ ($\beta = .10$), suggesting that some of the significant effect of RCI on CVQ might be explained by some additional variable(s) not accounted for in this model.

A separate path model was tested to determine whether SB mediated the relationship between PTGI and CVQ (see Table 4 for estimated parameters). In contradiction to the hypothesized model, SB did not significantly partially mediate the PTGI-CVQ relationship. PTGI significantly predicted SB ($\beta = .31, p = .001$) and CVQ ($\beta = .27, p = .008$), both with moderate effect sizes. In turn, PTGI and RCI significantly predicted CVQ; the overall model was significant, $F(2,99) = 6.66, p = .002$, and together these predictors accounted for 12% of the variance in calling. However, SB did not significantly impact CVQ ($\beta = .15, p = .13$), suggesting that when these predictors were considered together, only PTGI conferred significant change in CVQ. PTGI indirectly predicted CVQ ($\beta = .04$) through SB; using the bootstrap method with 1,000 iterations and examining the 95% confidence interval, this indirect effect was not found to be significant.

DISCUSSION

The purpose of this study was to determine whether experiencing a traumatic event, and subsequently experiencing posttraumatic growth (PTG), significantly affects an emerging adult's sense of vocational calling. Hypotheses were partially supported: as predicted, among college students who reported highly stressful past traumatic experiences, degree of PTG significantly predicted degree of career calling with a moderate effect size, even after controlling for gender differences. This result supports the theory that the experience of a traumatic event and psychological growth from that event may inform the emerging adult's search for and discovery of a career path that is purposeful, prosocial, and fulfilling. Identifying the existence of the PTG-calling relationship forges the first link between two burgeoning literatures, and offers the possibility to explore many more questions regarding the nature of this relationship.

Moving forward, it will be important to learn about the lived experience of students who reported a traumatic event, to elucidate the process by which their traumas have informed their identity and shaped their career path. A fundamental question is whether these students meaningfully associate their sense of calling with their traumatic event: Do they feel called *because of* what has happened to them? Did they change their mind about their major and/or career path, and are they more confident in their career path, as a result of the traumatic event? Do students who connect their calling with their trauma report greater calling and higher PTG than students who do not associate their calling with any particular life experience? A related line of inquiry is the congruence between students' career aspirations and the nature of their traumatic experience. For instance, do victims of accidents or natural disasters feel called to become first

responders? Are those who suffered serious medical illness more inclined toward careers in health care? This offers potential for better understanding the “wounded healer” or “survivor mission” phenomenon—whether trauma survivors seek a profession in which they can help those with parallel experiences (Eskreis-Winkler et al., 2014). Finally, individuals’ predilection for a vocational path may reflect the influence of particular individuals in their lives, and/or opportunity and availability of career options; these possibilities should be considered as they affect the relationship between trauma and calling.

In addition, it will be important to further explore how calling relates to other aspects of the PTG process. Although CES and CVQ were not directly related in this study, centrality of event and its impact on identity and the life narrative may still influence the emerging adult’s sense of calling in career development through increased PTG. Other key variables in the PTG model may similarly impact calling. For example, it is possible that the more substantially an individual’s basic assumptions about him/herself and the future are threatened by a traumatic event (i.e., *disruption of core beliefs*; Cann et al., 2010), the more deeply s/he reconsiders the vocational path s/he had been on and whether it still makes sense and provides meaning in light of his/her new world; given the demonstrated positive relationship between disruption of core beliefs and PTG (Cann et al., 2010), it is reasonable to propose that disruption of core beliefs may also indirectly increase calling through PTG. Similarly, with increased *rumination*, or repeated thinking, about the traumatic event (Cann et al., 2011; Tedeschi & Calhoun, 2004), the individual may be more likely to deliberately ponder what it means for his/her

identity, narrative, and future, including his/her career, and in turn experience higher PTG and higher calling.

Important psychological variables that relate to both PTG and calling may help explain the positive effect of PTG on calling. As hypothesized, religious commitment significantly partially mediated the PTG-calling relationship in the present study (H4), suggesting one pathway through which this effect is conferred. Other potential variables of interest are empathy and meaning in life. PTG is associated with increased empathy and prosocial values and action (e.g., Frazier et al., 2013; Tsai et al., 2016; Vollhardt & Staub, 2011), as well as with increased meaning in life (Triplett, Tedeschi, Cann, Calhoun, & Reeve, 2012). Career calling also has ties to both prosociality (e.g., Dik, Duffy, et al., 2012; Grant, 2008) and meaning (Dik et al., 2015; Steger et al., 2010). In this exploratory phase of understanding PTG and calling, it would be beneficial to examine these and other variables with the aim of more comprehensively modeling the process by which students use their traumatic experiences to inform a calling.

Contrary to prediction, in this sample, calling did not significantly differ between students who have not experienced a past traumatic event and those who have. This analysis, therefore, did not inform the distinction between calling due to normative development and calling due to PTG (Tedeschi & Calhoun, 2012). It was considered whether this result might have occurred because of the way groups were defined: Some students in the non-trauma group had reported an event, but as it did not meet the threshold perceived stressfulness at the time of event (i.e., at least 5 out of 7), they were not placed in the trauma group. Acknowledging the possibility that trauma might meaningfully relate to calling even among those individuals whose trauma experiences

were subjectively less stressful, analyses were repeated with groups defined solely by whether they reported an event at all (i.e., lifting the perceived stressfulness criterion). However, even after considering these new trauma ($n = 161$) and non-trauma ($n = 57$) groups, difference in CVQ (after controlling for gender, which was still a significant group difference) remained non-significant. Ultimately, the lack of a group difference in overall calling does not preclude the possibility that the nature of the calling reported in trauma and non-trauma students indeed varies. There could be both qualitative differences (e.g., non-trauma students are less likely to anecdotally associate their sense of calling with a particular life event than are trauma students) and quantitative (e.g., trauma students might endorse a higher degree of Prosocial Orientation, a CVQ subscale, than non-trauma students). Both types of data hold promise for extricating these answers.

There are limitations to the present study that warrant consideration. Importantly, this study design was cross-sectional, and therefore conclusions cannot be drawn about the directionality and causality of relationships between study variables. Future research should employ a longitudinal design to allow for the establishment of temporal precedence of these variables. For instance, it is possible that the PTG-calling relationship is bidirectional: in addition to the presently examined theory that growth from trauma can foster and strengthen one's sense of career calling, it may also be the case that students had a sense of calling before their trauma experience, and students who felt a greater sense of calling pre-trauma possess character traits or coping styles that rendered them more likely to experience and report PTG after a traumatic event occurred. Further examination is needed to understand the circumstances and mechanisms characterizing each direction.

This study was also limited in its measurement of religiousness. Although religious commitment and intrinsic religiousness have been associated with both calling (Davidson & Caddell, 1994; Duffy & Sedlacek, 2010; Steger et al., 2010) and PTG (Calhoun et al., 2000; Taku & Cann, 2014), it is possible that there are other validated measures or indicators that would better capture the nature of religiousness and how it relates to each of these variables. Furthermore, the failure to detect a significant mediating effect of strength of religious beliefs on the PTG-calling relationship may be a reflection of its cursory measurement through only one item.

Finally, it is worth noting potential sample bias. This sample consisted entirely of college students at a public university in the southeastern United States, most of who were in their freshman year (45%) and of non-Hispanic White race/ethnicity (68%). Although the calling literature does not indicate clear racial/ethnic differences (Douglass & Duffy, 2015; Douglass, Duffy, & Autin, 2016; Duffy et al., 2012; Duffy & Sedlacek, 2010), evidence suggests members of ethnic minority groups may be more likely to endorse PTG (Aldwin, 2007; Stanton et al., 2006; Vishnevsky, Cann, Calhoun, Tedeschi, & Demakis, 2010); thus, it is important to acknowledge the role of race/ethnicity and other demographic variables as they relate to PTG and other key study variables (e.g., religiousness, as this geographical region contains a more religious population).

Despite these limitations, this initial study is an exciting gateway to many future lines of inquiry and an important contribution to the PTG and calling literatures. Some researchers have questioned the validity of individuals' accounts of PTG, suggesting that self-reported growth is not corroborated by objective, concrete behavioral changes (e.g., Frazier, Tennen, et al., 2009). However, this study offers important preliminary evidence

that PTG indeed converts, or primes a conversion, to observable action and behavior. College students who report PTG and are following an identified vocational calling are potentially a population demonstrating that the experience of growth can result in tangible changes—here, the active pursuit of higher education and a meaningful career path. A valuable body of literature can arise from developing a more comprehensive model that explains the underlying mechanisms of the PTG-calling relationship. The present study is a promising preliminary investigation of the rich, complex interplay of emerging adults' posttraumatic growth with their dynamic identity and career development, and holds promise for a deeper and more meaningful empirical understanding of lifespan development and young adults' well-being in work and life.

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APPENDIX A: STUDY MEASURES

Trauma Checklist

Please indicate whether you have ever experienced each of the following stressful events. You may choose as many as are relevant to your experiences.

- NO YES I experienced the UNEXPECTED death of a close relative, close friend, or significant other.
- NO YES I PERSONALLY experienced a VERY SERIOUS medical problem.
- NO YES A close friend, significant other or close family member experienced a VERY SERIOUS medical problem.
- NO YES I experienced an accident that led to SERIOUS INJURY to me.
- NO YES Someone very close to me experienced an accident that led to SERIOUS INJURY.
- NO YES I caused an accident that led to a SERIOUS INJURY to someone.
- NO YES MY place of residence was SERIOUSLY damaged by fire or other natural cause.
- NO YES I experienced a situation in which I felt I faced potential death or serious bodily harm.
- NO YES I witnessed a SEVERE assault of a friend or family member.
- NO YES I was a victim of a SEVERE physical assault.
- NO YES I was sexually assaulted.
- NO YES I experienced SERIOUS physical abuse by an intimate partner.
- NO YES I was robbed or mugged.
- NO YES I was stalked.
- NO YES I was deployed with the military to an active combat zone.

Please provide a brief description of the traumatic experience you have had. If you have endured more than one traumatic event, please describe the one that has had the most

impact on you and note that it was not the only event. If you have suffered a loss (e.g., death of a loved one), please clarify how the loss occurred.

How long ago did this event occur? (Please be as specific as possible.)

How stressful was the event for you *at the time it happened?*

1	2	3	4	5	6	7
Not at all Stressful						Extremely stressful

How stressful has the event been for you *in the last week?*

1	2	3	4	5	6	7
Not at all Stressful						Extremely stressful

Posttraumatic Growth Inventory

Indicate for each of the statements below the degree to which this change occurred in your life as a result of your stressful life event, using the following scale:

0 = I did not experience this change as a result of my crisis.

1 = As a result of my crisis, I experienced this change to a very small degree.

2 = As a result of my crisis, I experienced this change to a small degree.

3 = As a result of my crisis, I experienced this change to a moderate degree.

4 = As a result of my crisis, I experienced this change to a great degree.

5 = As a result of my crisis, I experienced this change to a very great degree.

1. My priorities about what is important in life.
2. An appreciation for the value of my own life.
3. I developed new interests.
4. A feeling of self-reliance.
5. A better understanding of spiritual matters.
6. Knowing that I can count on people in times of trouble.
7. I established a new path for my life.
8. A sense of closeness with others.
9. A willingness to express my emotions.
10. Knowing I can handle difficulties.
11. I'm able to do better things with my life.
12. Being able to accept the way things work out.
13. Appreciating each day.
14. New opportunities are available which wouldn't have been otherwise.
15. Having compassion for others.
16. Putting effort into my relationships.
17. I'm more likely to try to change things which need changing.
18. I have a stronger religious faith.
19. I discovered that I'm stronger than I thought I was.
20. I learned a great deal about how wonderful people are.
21. I accept needing others.

Centrality of Events Scale

Please think back upon the event you reported and answer the following questions in an honest and sincere way.

	Totally disagree				Totally agree
1 This event has become a reference point for the way I understand new experiences.	1	2	3	4	5
2 I automatically see connections and similarities between this event and experiences in my present life.	1	2	3	4	5
3 I feel that this event has become part of my identity.	1	2	3	4	5
4 This event can be seen as a symbol or mark or important themes in my life.	1	2	3	4	5
5 This event is making my life different from the life of most other people.	1	2	3	4	5
6 This event has become a reference point for the way I understand myself and the world.	1	2	3	4	5
7 I believe that people who haven't experienced this type of event think differently than I do.	1	2	3	4	5
8 This event tells a lot about who I am.	1	2	3	4	5
9 I often see connections and similarities between this event and my current relationships with other people.	1	2	3	4	5
10 I feel that this event has become a central part of my life story.	1	2	3	4	5
11 I believe that people who haven't experienced this type of event, have a different way of looking upon themselves than I have.	1	2	3	4	5
12 This event has colored the way I think and feel about other experiences.	1	2	3	4	5
13 This event has become a reference point for the way I look upon my future.	1	2	3	4	5
14 If I were to weave a carpet of my life, this	1	2	3	4	5

- event would be in the middle with threads going out to many other experiences.
- 15 My life story can be divided into two main chapters: one is before and one is after this event happened. 1 2 3 4 5
- 16 This event permanently changed my life. 1 2 3 4 5
- 17 I often think about the effects this event will have on my future. 1 2 3 4 5
- 18 This event was a turning point in my life. 1 2 3 4 5
- 19 If this event had not happened to me, I would be a different person today. 1 2 3 4 5
- 20 When I reflect upon my future, I often think back to this event. 1 2 3 4 5

Religious Commitment Inventory

Read each of the following statements. Using the scale to the right, select the response that best describes how true each statement is for you.	Not at all true of me	Some- what true of me	Moder- ately true of me	Mostly true of me	Totally true of me
I often read books and magazines about my faith.	1	2	3	4	5
I make financial contributions to my religious organization.	1	2	3	4	5
I spend time trying to grow in understanding of my faith.	1	2	3	4	5
Religion is especially important to me because it answers many questions about the meaning of life.	1	2	3	4	5
My religious beliefs lie behind my whole approach to life.	1	2	3	4	5
I enjoy spending time with others of my religious affiliation.	1	2	3	4	5
Religious beliefs influence all my dealings with life.	1	2	3	4	5
It is important to me to spend periods of time in private religious thought and reflection.	1	2	3	4	5
I enjoy working in the activities of my religious affiliation.	1	2	3	4	5
I keep well informed about my local religious group and have some influence in its decision.	1	2	3	4	5

Calling and Vocation Questionnaire

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.

	Not at all true of me	Somewhat true of me	Mostly true of me	Absolutely true of me
1 I believe that I have been called to my current line of work.	1	2	3	4
2 I'm searching for my calling in my career.	1	2	3	4
3 My work helps me live out my life's purpose.	1	2	3	4
4 I am looking for work that will help me live out my life's purpose.	1	2	3	4
5 I am trying to find a career that ultimately makes the world a better place.	1	2	3	4
6 I intend to construct a career that will give my life meaning.	1	2	3	4
7 I want to find a job that meets some of society's needs.	1	2	3	4
8 I do not believe that a force beyond myself has helped guide me to my career.	1	2	3	4
9 The most important aspect of my career is its role in helping to meet the needs of others.	1	2	3	4
10 I am trying to build a career that benefits society.	1	2	3	4
11 I was drawn by something beyond myself to pursue my current line of work.	1	2	3	4

12	Making a difference for others is the primary motivation in my career.	1	2	3	4
13	I yearn for a sense of calling in my career.	1	2	3	4
14	Eventually, I hope my career will align with my purpose in life.	1	2	3	4
15	I see my career as a path to purpose in life.	1	2	3	4
16	I am looking to find a job where my career clearly benefits others.	1	2	3	4
17	My work contributes to the common good.	1	2	3	4
18	I am trying to figure out what my calling is in the context of my career.	1	2	3	4
19	I'm trying to identify the area of work I was meant to pursue.	1	2	3	4
20	My career is an important part of my life's meaning.	1	2	3	4
21	I want to pursue a career that is a good fit with the reason for my existence.	1	2	3	4
22	I am always trying to evaluate how beneficial my work is to others.	1	2	3	4
23	I am pursuing my current line of work because I believe I have been called to do so.	1	2	3	4
24	I try to live out my life purpose when I am at work.	1	2	3	4

APPENDIX B: TABLES

TABLE 1: Descriptive statistics and zero-order correlations

Variables	<i>N</i>	<i>M</i>	<i>SD</i>	1	2	3	4	5
1. CVQ	200	66.75	14.24	(.94)				
2. PTGI	109	53.06	25.28	.34**	(.96)			
3. CES	118	2.78	1.00	.16	.56**	(.96)		
4. RCI	213	24.10	11.48	.32**	.38**	.21*	(.96)	
5. SB	218	2.50	0.96	.20**	.31**	.13	.79**	--

Note. CVQ = calling, PTGI = posttraumatic growth, CES = centrality of event, RCI = religious commitment, and SB = strength of religious beliefs. Alpha reliabilities are reported on the diagonal.

* $p < .05$ (2-tailed); ** $p < .01$ (2-tailed).

TABLE 2: Summary of hierarchical multiple regression analysis testing gender and posttraumatic growth in the prediction of calling

Model		<i>b</i>	<i>S.E.</i>	β	R^2	ΔR^2
<i>Step 1</i>	(Intercept)	-3.01	2.16		.05*	.05*
	Gender	6.53*	2.73	.23		
<i>Step 2</i>	(Intercept)	-2.21	2.07		.39**	.13**
	Gender	5.15	2.63	.18		
	PTGI	0.18**	0.05	.32		

Note. $N = 104$. b = unstandardized beta weight; β = standardized beta weight. PTGI = posttraumatic growth.

* $p < .05$. ** $p < .01$.

TABLE 3: Summary of Path Analysis Associating Posttraumatic Growth, Religious Commitment, and Calling

	2	Calling
1. Posttraumatic Growth		
Total Effect	.38***	.32**
Direct Effect	.38***	.24*
Indirect Effect	--	.08*
2. Religious Commitment		
Total Effect	--	.20*
Direct Effect	--	.20*
Indirect Effect	--	--
Spurious Effect	--	.10

Note. $N = 102$. All reported values are standardized beta weights (β).

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

TABLE 4: Summary of Path Analysis Associating Posttraumatic Growth, Strength of Religious Beliefs, and Calling

	2	Calling
1. Posttraumatic Growth		
Total Effect	.31**	.31**
Direct Effect	.31**	.27**
Indirect Effect	--	.04
2. Strength of Beliefs		
Total Effect	--	.15
Direct Effect	--	.15
Indirect Effect	--	--
Spurious Effect	--	.08

Note. $N = 102$. All reported values are standardized beta weights (β).

** $p < .01$.