

If One is Looking for Meaning in Life, Does it Help to Find Meaning in Work?

Michael F. Steger* and Bryan J. Dik
Colorado State University, USA

People experience well-being at both global (life) and domain (e.g. careers) levels, and presumably people experience meaning on both levels as well. Two studies assessed whether finding meaning on one level “satisfies” people’s search for meaning at the other level. Study 1 assessed this question by analysing survey responses from 231 undergraduate students, finding a significant interaction such that people seeking global-level meaning in life reported greater well-being and self-efficacy in choosing a career if they experienced domain-level meaning in their careers. Study 2 used both calling-focused and traditional career workshops in an effort to experimentally induce a sense of domain-level meaning in careers in a sample of 91 undergraduate students. There was a trend for people seeking global-level meaning in life to report greater reductions in depressive symptoms and increased domain-level meaning in their careers following the workshops. Together these studies suggest that people seeking global-level meaning in life are, indeed, satisfied by experiencing meaning in their careers. We discuss these results in terms of how career and workplace interventions might be tailored according to how intently people are seeking meaning.

Keywords: calling, domain satisfaction, meaning in life, meaningful work, vocation

INTRODUCTION

Many psychologists have argued that deriving meaning from life experiences is essential for psychological health (e.g. King, Hicks, Krull, & Del Gaiso, 2006; Ryff & Singer, 1998), yet surprisingly little is known about how people do this. One perspective has drawn attention to the specific sources of meaning people identify in their lives. For example, some people feel that raising their children, volunteering at a hospital, or being good at their work gives them a sense of meaningfulness that pervades the rest of their lives. It

* Address for correspondence: Michael F. Steger, Department of Psychology, Colorado State University, 1876 Campus Delivery, Fort Collins, CO 80523-1876, USA. Email: michael_f_steger@yahoo.com

may be that experiences that impact these sources of meaning have particular importance for people's judgments of the meaning they experience in their lives as a whole (Krause, 2004). Sources of meaning are typically categorised into important domains of meaning (e.g. Prager, 1998), and whatever enhances or erodes people's experiences in those domains may, in turn, enhance or erode the amount of meaning people experience in their lives as a whole. Examining meaning in specific life domains therefore holds promise for understanding the origins of people's perceived meaning in life. In the present study, we examined how people's experiencing of meaning in life—and also their dedication to seeking meaning—was related to experiencing and seeking meaning in the career domain.

Research on life satisfaction and well-being has a fairly long history of considering how experiences in life domains play into more global impressions of well-being. One offshoot of this research has been the recognition that the career domain is highly relevant to how many people make global judgments about well-being in their lives as a whole (e.g. Cummins, 1996; Diener, Suh, Lucas, & Smith, 1999; Headey, Veenhoven, & Wearing, 1991; Rojas, 2006). For example, people who feel their psychological needs are met in their workplaces report higher self-esteem and less anxiety (Deci et al., 2001). This finding is an example of how domain-level experiences can influence global-level perceptions of well-being. It is also possible that the direction of influence could run the other way. It is possible that generally happy people tend to have better experiences in every life domain. In terms of meaning, we must consider the possibility that people who experience greater global-level meaning in life are more likely to experience greater domain-level meaning as well.

In the present research, we were interested in how people's experiences with meaning in their careers relate to their experiences with meaning in their lives as a whole. Recently, researchers have used the concept of *calling* to understand the role of work in well-being. In its broadest construal, calling refers to the belief that one's career provides meaningful and purposeful experiences, and serves a greater good (Dik & Duffy, 2009; Hall & Chandler, 2005). Experiencing a calling is positively related to well-being (e.g. Wrzesniewski, McCauley, Rozin, & Schwartz, 1997). Baumeister (1991) proposed that approaching work as a calling enables work to satisfy several of people's needs for the experience of meaning in life. In other words, calling captures the essence of a "work-as-meaning" perspective that argues that meaningful work can provide a source of meaning in life. People who feel their work is a calling also feel their lives are more meaningful (Duffy & Sedlacek, 2007). In the present study, we used calling to assess career-level meaning. Thus, we were concerned with the relations between domain-level meaning (i.e. calling) and global-level meaning (i.e. meaning in life).

However, the question of whether domain-level or global-level meaning is more important to well-being is not constrained to meaning alone; influences

on other indices of domain-level and global-level functioning are also relevant. This approach entails comparisons of how domain-level and global-level meaning are related to both domain-level variables such as one's confidence in making career decisions and global-level variables such as life satisfaction. For example, career-level meaning might be related to both career decision-making confidence and life satisfaction, but global-level meaning might only be related to life satisfaction. In this example, this pattern of findings would suggest that career-level meaning is more influential. We examined the pattern of these relations to give us another way to evaluate whether meaning wells up from life domains or trickles down from global impressions of meaning in life as a whole.

Research on meaning in life has established that how much people experience meaning is fairly independent of how dedicated they are in seeking meaning (e.g. Steger, *in press*). The experiencing dimension concerns people's perceptions of the presence of meaning in their lives. Presence of meaning has been defined as the extent to which people feel their lives matter and make sense to them on a subjective level (King et al., 2006). The motivational dimension concerns the degree to which people seek meaning in life. This search for meaning has been defined as the strength with which people are trying to establish and/or augment their sense of whether their lives matter and make sense to them (Steger, *in press*). The relation between seeking and experiencing meaning is complex. Factor analytic and multitrait-multimethod matrix evidence suggest that search for meaning and presence of meaning are distinguishable, both contemporaneously and longitudinally (e.g. Steger, Frazier, Oishi, & Kaler, 2006; Steger & Kashdan, 2007). Although people searching for meaning might generally be expected to find it, evidence from the most comprehensive investigation of this relation to date has suggested that deficits in meaning spark people to search for meaning (Steger, Kashdan, Sullivan, & Lorentz, 2008). Hence, it is not clear under which circumstances searching for meaning might lead to experiencing more meaning. Just as people may experience meaning on both global and domain-specific levels, they may seek meaning on both levels as well. For example, people lacking meaning in life in general might seek meaning in their career pursuits. This question—whether people seeking meaning in life can be satisfied (in terms of higher well-being) by experiencing meaning in their careers, or vice versa—is the centerpiece of the present studies.

We used two studies to examine the interplay of domain-level meaning and global-level meaning in life, focusing on the career domain in two samples of college students. It is reasonable to ask whether college students would have an understanding of career meaning. Many occupations require several years of professional training before the actual “job” can be started, and many people may feel “called” to a particular vocation from a relatively early age. Therefore, many students and pre-professionals engage in the profession for

years before earning their first paycheck, and one might suspect that a critical mass of students are motivated in this engagement by uniquely meaningful aspirations for their career lives. Accordingly, college students, through their studies, experience career-relevant meaning. Furthermore, given that a critical developmental task of young adulthood is choosing an occupation (Arnett, 2000), we suspect that seeking meaningful work is a particularly salient concern for college students relative to other populations. Thus, we argue that college samples are appropriate for exploring basic questions about how life and domain meaning interact to influence well-being.

In Study 1, we surveyed college students on their global meaning and career meaning, and included measures of well-being (life satisfaction and depression) and career attitudes (career decision efficacy). Both the domain-level and global-level measures we used to assess meaning captured the experience of meaning as well as people's seeking of meaning. Thus, in this study, we focused on the relations of career and life meaning to each other and to well-being and career attitudes. We also looked at whether seeking meaning at one level, and experiencing meaning at the other level, was related to well-being and career attitudes.

In Study 2, we took a close look at the interaction of seeking and experiencing using an experimental design in which college students attended career workshops. The workshops were thought to provide some degree of career meaning, so we were interested in whether people seeking global meaning in life would respond to this domain-level intervention more positively.

STUDY 1

Study 1 focused on ways in which global-level and domain-level meaning are related to each other, and to well-being and career attitudes, using a survey method in a college student sample. Because participants were college students, and we did not expect them to be employed in their desired occupation, we chose career decision efficacy as the indicator of career-domain functioning. Students with high levels of career decision efficacy exhibit greater engagement with career exploration activities (Gushue, Scanlan, Pantzer, & Clarke, 2006) and have greater career-related confidence (Paulsen & Betz, 2004). Those in our sample with greater career decision efficacy can be expected to be more effectively engaged in efforts to identify and pursue a career. Thus, career decision efficacy is an appropriate measure of positive career attitudes.

Method

Participants. A total of 231 introductory psychology students from the University of Minnesota (M age = 19.7, SD = 2.8; 74% female; 86%

European-American, 10% Asian-American, and 4% for all other ethnicities) completed a battery of questionnaires for course credit.

Procedures. Participants responding to a posted description of the study contacted researchers by e-mail and were sent a URL/internet address for consent materials and questionnaires.

Instruments. Meaning in Life: A short version of the Meaning in Life Questionnaire (Steger et al., 2006) was used in this study, consisting of a three-item presence of meaning items subscale (e.g. "I understand my life's meaning"; "My life has a clear sense of purpose"; $\alpha = .81$) and a five-item search for meaning subscale (e.g. "I am searching for meaning in my life"; $\alpha = .89$).

Calling: Using the Brief Calling Scale (BCS; Dik, Sargent, & Steger, 2008), the presence of a calling was assessed with two items ("I have a calling to a particular kind of work"; "I have a good understanding of my calling as it applies to my career") rated from 1 (*not at all true of me*) to 5 (*totally true of me*). Seeking a calling was assessed using two items ("I am trying to figure out my calling in my career"; "I am searching for a calling as it applies to my career") on the same 5-point scale. Similar to Duffy and Sedlacek (2007), evidence of internal consistency of scores was strong for both the calling subscale ($\alpha = .88$) and the calling-seeking subscale ($\alpha = .85$).

Career Attitudes: The short form of the Career Decision Self-Efficacy scale (CDSE; Betz, Klein, & Taylor, 1996) was used to measure efficacy expectations in relation to making decisions about career-related issues. Twenty-five items are rated from 0 (*no confidence at all*) to 9 (*complete confidence*). Evidence for the reliability and validity of CDSE short-form scores are well established (c.g. Betz et al., 1996). Total score internal consistency reliability for the present sample was $\alpha = .91$.

Well-Being: The Satisfaction with Life Scale (SWLS; Diener, Emmons, Larson, & Griffin, 1985) is a widely used and well-validated measure of life satisfaction. Five items are rated from 1 (*strongly disagree*) to 7 (*strongly agree*) ($\alpha = .90$). The SWLS has good reliability and substantial convergent and discriminant validity (Pavot & Diener, 1993).

The depression subscale of the Brief Symptom Inventory (Derogatis & Spencer, 1982) is a brief measure of depression symptoms. The intensity of six depression symptoms (e.g. "feeling blue") is rated from 0 (*not at all*) to 4 (*extremely*) ($\alpha = .88$).

Results

Descriptive statistics for all scales are presented in Table 1, and correlations among the meaning, well-being, and career variables are shown in Table 2.

TABLE 1
Scale Means and Standard Deviations

Scale	Study 2			Study 2 (Control Condition)
	Study 1	(Total Sample)	(Calling Condition)	
N	231	91	28	33
Calling (Time 1)	6.0 (2.1)	6.2 (1.9)	6.2 (1.8) ^a	6.0 (2.1) ^a
Calling (Time 2)	—	6.9 (1.5)	7.0 (1.4)^a	6.8 (1.5)^a
Calling-Seeking (Time 1)	5.6 (2.3)	6.6 (2.1)	6.7 (2.2) ^a	6.1 (1.9) ^b
Calling-Seeking (Time 2)	—	6.0 (2.3)	5.5 (1.8) ^a	5.9 (2.3) ^a
SWLS (Time 1)	25.7 (5.6)	—	—	—
SWLS (Time 2)	—	25.4 (4.8)	25.0 (4.5) ^a	25.7 (4.5) ^a
Depression (Time 1)	11.0 (4.6)	9.8 (2.9)	9.5 (2.9) ^a	9.7 (3.5) ^a
Depression (Time 2)	—	8.9 (3.7)	8.6 (3.6) ^a	8.4 (3.0)^a
CDSE (Time 1)	149.3 (22.3)	—	—	—
CDSE (Time 2)	—	154.4 (25.9)	159.3 (26.4) ^a	156.1 (24.6) ^a
MLQ-Presence (Time 1) †	14.2 (3.4)	14.0 (3.4)	14.6 (2.5) ^a	13.4 (3.5) ^a
MLQ-Presence (Time 2) †	23.4 (6.7)	15.0 (2.8)	15.7 (2.8) ^a	14.4 (3.4) ^a
MLQ-Search (Time 1)	—	25.4 (6.1)	25.0 (7.0) ^a	24.5 (6.5) ^a
MLQ-Search (Time 2)	—	22.1 (3.6)	22.3 (3.6) ^a	22.0 (3.6)^a

Notes: MLQ = Meaning in Life Questionnaire; SWLS = Satisfaction with Life Scale; CDSE = Career Decision Self-Efficacy. Study 2 group means with different superscripts differ at the $p < .05$ level of significance, using Least Significant Difference post-hoc comparisons. The use of boldface for Study 2 group means indicates that there are significant differences between Time 1 and Time 2 on that variable using paired-sample t -test, $p < .05$. Italics indicate differences that are significant at the $p < .10$ level.

† Three items.

TABLE 2
Correlations between Calling and Meaning in Life Variables and Work-Related Variables

	Calling	Seeking Calling	MLQ-Presence†	MLQ-Search	SWLS ^a	Depression	CDSE ^a
Calling							
Calling-Seeking	<i>-.18*</i>		.42***	.12	.17	-.20+	.47***
MLQ-Presence†	.45***	-.29**	-.20**	.31**	-.11	.15	-.45***
MLQ-Search	.00	.40***	-.23**	.00	.50***	-.34***	.39***
SWLS ^a	-.15	.23*	-.52***	-.27**	-.20+	.14	.00
Depression	-.15	.23*	-.52***	-.27**	-.20+	-.46***	.24*
CDSE ^a	-.15	.23*	-.52***	-.27**	-.20+	-.46***	-.31**
Time 2 Calling	.57***	-.20*	.33***	.07	-.07	-.07	-.07
Time 2 Calling-Seeking	-.32**	.55***	-.22*	.20*	-.06	.06	-.06
Time 2 MLQ-Presence	.38***	-.15	.57***	-.15	-.40***	-.40***	-.40***
Time 2 MLQ-Search	.02	.42***	-.15	.68***	-.16	.16	.16
Time 2 SWLS	.13	-.02	.38***	-.06	-.48***	-.48***	-.48***
Time 2 Depression	.29**	-.27*	.33***	.00	-.23*	-.23*	-.23*
Time 2 CDSE	-.18*	.24*	-.52***	.22*	-.77***	-.77***	-.77***

Notes: N = 231 for Study 1; N = 91 for Study 2. * p < .10; ** p < .05; *** p < .001. Correlation coefficients from Study 1 are above the diagonal; correlation coefficients from Study 2 are italicized and presented below the diagonal. MLQ = Meaning in Life Questionnaire; SWLS = Satisfaction with Life Scale; CDSE = Career Decision Self-Efficacy.

† Three items.

^a scale not administered at Time 1 in Study 2.

Generally, the pattern of correlations suggests that for both experiencing and seeking dimensions, meaning in life is related to calling, but not so strongly to suggest redundancy. Experiencing meaning at either the global or domain level was related to higher well-being and career decision efficacy, whereas seeking meaning at either level typically was associated with less well-being and career decision efficacy. Correlations with well-being and career decision efficacy appeared higher for meaning in life than for calling. To more formally test this observation, we used a series of regressions estimating the variance in global and career functioning simultaneously accounted for by global and career meaning. These analyses provide an indication of whether global meaning or career meaning had more consistent relations with well-being and career decision efficacy.

The first set of regressions focused on the experiencing dimension. In the first regression (adjusted $R^2 = .24$, $F = 37.13$, $p < .001$), global meaning was significantly and positively related to SWLS scores ($\beta = .50$, $p < .001$), but career meaning was not ($\beta = .00$, *ns*). In the second regression (adjusted $R^2 = .12$, $F = 16.25$, $p < .001$), global meaning was negatively related to depression ($\beta = -.39$, $p < .001$), but career meaning was not ($\beta = .11$, *ns*). In the final regression (adjusted $R^2 = .13$, $F = 17.96$, $p < .001$), both global meaning and career decision efficacy ($\beta = .29$, $p < .001$) and career meaning were significantly and positively related to career decision efficacy ($\beta = .15$, $p < .05$). This pattern of findings suggests that some matching may occur within domain, but the consistency of significant relations for global meaning better supports the top-down model within the experiencing dimension of meaning.

The second set of regressions focused on the seeking dimension. In the first regression (adjusted $R^2 = .09$, $F = 12.16$, $p < .001$), global meaning-seeking was significantly and negatively related to life satisfaction ($\beta = -.25$, $p < .001$), whereas career meaning-seeking was only marginally, negatively related to life satisfaction ($\beta = -.12$, $p < .10$). In the second regression (adjusted $R^2 = .08$, $F = 10.10$, $p < .001$), global meaning-seeking was significantly and positively related to depression ($\beta = .26$, $p < .001$), but career meaning-seeking was not ($\beta = .07$, *ns*). In the final regression (adjusted $R^2 = .10$, $F = 13.33$, $p < .001$), global meaning-seeking was marginally, negatively related to career decision efficacy ($\beta = -.12$, $p < .10$), whereas career meaning-seeking was significantly and negatively related to career decision efficacy ($\beta = -.27$, $p < .001$). From these results, it appears that within the seeking dimension, meaning was more closely matched within the same level (global vs. domain). It appeared to matter *where* people sought meaning. People seeking career meaning reported less career decision efficacy; people seeking global meaning in life reported less well-being.

Finally, we looked at whether experiencing meaning at one level (e.g. globally, in life) "satisfies" seeking meaning at the other level (e.g. in the career domain) in terms of higher well-being and career decision efficacy. To

do this, we examined the interaction between seeking and experiencing meaning *across* domain-specific and global levels using regression, following guidelines for regression-based moderation analyses (Baron & Kenny, 1986).

The first series of regression addressed whether people seeking domain-level career meaning are better off if they experience global-level meaning in life. We entered standardised calling-seeking and MLQ-P scores in the first step of a regression, with their interaction term entered in the second step. Interactions did not predict experiencing calling ($\beta = -.12$, $\Delta R^2 = .01$, $\Delta F = 2.19$, *ns*), life satisfaction ($\beta = .00$, $\Delta R^2 = .00$, $\Delta F = .00$, *ns*), or depression ($\beta = -.03$, $\Delta R^2 = .00$, $\Delta F = .29$, *ns*), although the interaction was significant for career decision efficacy ($\beta = -.13$, $\Delta R^2 = .02$, $\Delta F = 4.28$, $p < .05$). Simple slopes analysis (Aiken & West, 1991) indicated a stronger inverse relation between seeking career meaning and career decision efficacy among people experiencing high levels of global meaning ($\beta = -.31$, $p < .001$) than among people experiencing low levels of global meaning ($\beta = -.09$, $p > .10$). This means that people seeking career meaning who experience global meaning in life are surprisingly less confident about their ability to make career decisions. Thus, life meaning did not satisfy the search for career meaning.

The second series of regression addressed whether people seeking global-level meaning in life are better off if they experience domain-level career meaning. We entered standardised Calling and MLQ-S scores in the first step of a regression, with their interaction term entered in the second step. In contrast to the previous analyses, most interactions were significant, with the interaction of experiencing calling and seeking life meaning significantly predicting experiencing life meaning ($\beta = .15$, $\Delta R^2 = .02$, $\Delta F = 6.70$, $p < .001$), life satisfaction ($\beta = .16$, $\Delta R^2 = .03$, $\Delta F = 6.63$, $p < .001$), and career decision efficacy ($\beta = .13$, $\Delta R^2 = .02$, $\Delta F = 3.97$, $p < .05$), but not depression ($\beta = -.07$, $\Delta R^2 = .01$, $\Delta F = 1.11$, *ns*). Simple slopes analyses indicated a weaker inverse relation between seeking global meaning and experiencing global meaning among people experiencing high levels of career meaning ($\beta = -.14$, $p < .05$) than among people experiencing low levels of career meaning ($\beta = -.48$, $p < .001$). Likewise, there was a weaker inverse relation between seeking global meaning and life satisfaction among people experiencing high levels of career meaning ($\beta = -.13$, $p < .10$) than among people experiencing low levels of career meaning ($\beta = -.42$, $p < .001$). Thus, experiencing meaning in work appeared to satisfy the search for global meaning in terms of global functioning. There also was a weaker inverse relation between seeking global meaning and career decision efficacy among people experiencing high levels of career meaning ($\beta = -.04$, $p > .10$) than among people experiencing low levels of career meaning ($\beta = -.35$, $p < .001$). Taken together these findings suggest that if someone is seeking meaning in life, career meaning may provide an avenue for satisfying that search, yielding well-being, career-related efficacy, and even meaning in life.

Discussion

Global-level meaning in life and domain-level career meaning typically go hand-in-hand, and meaning in life is a stronger correlate of well-being and career decision efficacy than career meaning. At the same time, there was little evidence that experiencing meaning in life played much of a role in satisfying people's search for meaning in their careers. Instead, results from Study 1 suggested that it was more likely that people seeking meaning in their lives were better off if they experienced meaning in their career pursuits. Because this study used survey responses collected at one point in time, it is impossible to know what kind of causal chain might link searching for meaning in life, experiencing meaning in career, and experiencing higher well-being. Therefore, we conducted a second study to allow us to test this causal model.

STUDY 2

One advantage of focusing on specific domains is that interventions are easier to conceptualise and conduct at the domain level than at the global level. People seeking meaning in life are faced with few identifiable routes to achieve meaning; global-level approaches would necessarily focus on the abstract concept of meaning in life, and emphasise experiencing meaning in life. Some have argued that looking for global meaning in this manner is a recipe for meaninglessness (Bugental, 1965). In contrast, domain-specific approaches would encourage people seeking meaning in their lives to focus on things that they can do in their careers that provide meaning. One advantage of a domain-specific approach, then, is that it provides people with more concrete ways to pursue meaning.

In Study 1, career meaning appeared to satisfy people seeking life meaning. To better test our causal proposition, in Study 2, levels of career meaning were experimentally manipulated using a calling-centered workshop. We predicted that people high in the search for global meaning in life would report more positive outcomes after the workshop than those low in this search.

However, a traditional career development workshop may also provide work meaning-related benefits. We developed a second condition, following the parameters of a traditional career development workshop. This workshop was designed to help participants gain knowledge about themselves, the world of work, and procedures for effectively identifying and obtaining desirable employment. These three outcomes are analogous to the theoretical underpinnings of meaning in life (i.e. understanding self, world, and fit in world; Steger, *in press*). Essentially, they, too, should provide participants with work-related meaning. Thus, we combined both workshop conditions to examine the interaction of global meaning-seeking and the induction of domain-level, career meaning.

Method

Participants. Participants were recruited from the University of St Thomas, using posted and e-mail newsletter-based advertisements and in-class announcements. A total of 91 participants (75% female; M age = 20.3 years, $SD = 3.9$; 88% European-American, 5% Asian-American, remaining 7% African-American, African, Asian or Pacific Islander, Hispanic, Middle Eastern, or declining to respond) completed all components of the study.

Procedure. Following recruitment, participants contacted researchers by e-mail and were randomly assigned to one of three conditions: calling-centered condition ($n = 28$), traditional career development condition ($n = 33$), and wait-list control condition ($n = 30$). Participants were then sent an e-mail containing a study identification number and a URL/internet address for a page containing consent materials and the MLQ. This e-mail also included instructions to attend a workshop (either the calling-centered or traditional workshop, depending on condition assignment) or the statement that the workshop was filled and that they would be contacted at a later date (wait-list control). All workshops were held on the same day and consisted of two separate one-hour sessions conducted one week apart. Both workshops provided information about career development issues relevant to undergraduate students, an orientation to a person-environment fit approach to finding a satisfying career, and the administration and group-based interpretation of a multidimensional vocational interest inventory. The calling-centered workshop replaced some career development and person-environment fit material with content focused on experiencing a sense of greater purpose and altruistic concerns in work. Participants assigned to the wait-list control condition completed post-experiment measures on the same day as the second workshop sessions were conducted. For more details concerning content, procedures, and compliance with condition, see Dik and Steger (2008).

Instruments. Participants completed a web-based version of the MLQ prior to participating in the intervention. As was the case in Study 1, we used the three-item MLQ-P scale ($\alpha = .75$) and the five-item MLQ-S ($\alpha = .86$). Following the intervention, participants completed paper-and-pencil versions of the MLQ-P ($\alpha = .76$) and MLQ-S ($\alpha = .83$), calling ($\alpha = .78$), calling-seeking ($\alpha = .77$), depressive symptoms ($\alpha = .87$), SWLS ($\alpha = .82$), and CDSE ($\alpha = .93$).

Results

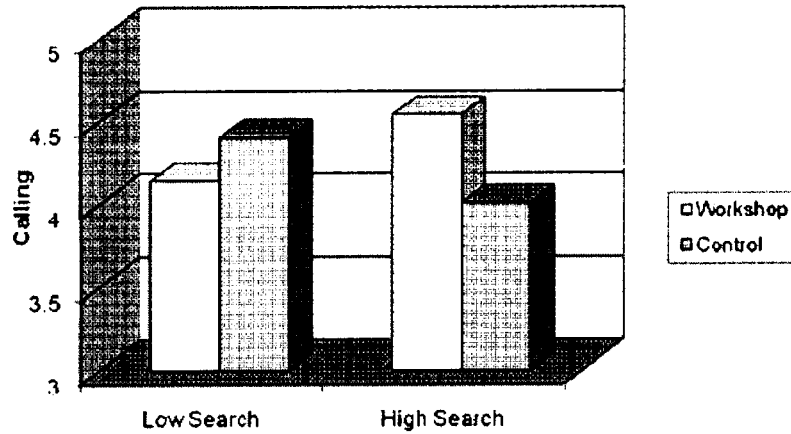
Scale means and standard deviations are presented in Table 1, and scale intercorrelations are presented in Table 2.

The basic question of this experiment was whether an individual's search for global meaning could be satisfied by interventions that heightened career meaning. We created effects codes to compare workshop (calling-centered and traditional workshops combined) versus the wait-list control conditions. We assessed residualised change by regressing post-intervention functioning (i.e. Calling, MLQ-P, SWLS, Depression, and CDSE) on the effects code and Time 1 MLQ-S scores, as well as Time 1 measures of functioning when available, in step 1. Interaction terms for workshop effects codes and MLQ-S scores and were entered in the second step, allowing for simultaneous comparisons of global seeking and domain seeking. Thus, these regressions provide highly conservative tests of whether the workshops created changes in global and career functioning and whether people high in global meaning-seeking reacted more strongly to these interventions.

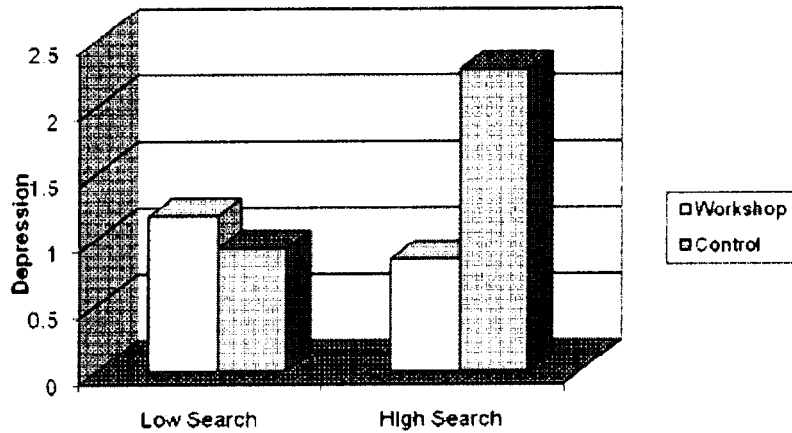
In terms of experienced global meaning in life ($\beta = -.06$, $\Delta R^2 = .02$, $\Delta F = 2.53$, *ns*), life satisfaction ($\beta = -.09$, $\Delta R^2 = .01$, $\Delta F = .52$, *ns*), and career decision-making efficacy ($\beta = -.11$, $\Delta R^2 = .01$, $\Delta F = .93$, *ns*), people seeking meaning in their lives did not experience a boost from the enhanced sense of career meaning we thought would be produced by the career workshops. However, some encouraging trends did emerge from the data. People seeking global meaning trended toward a heightened experience of career meaning ($\beta = -.16$, $\Delta R^2 = .02$, $\Delta F = 2.53$, $p = .12$), and compared to other participants, they showed marginally significant reductions in depressive symptoms ($\beta = .14$, $\Delta R^2 = .02$, $\Delta F = 3.49$, $p < .10$). These trends were particularly notable in light of how high global meaning-seeking participants fared in the control condition (Figure 1). People who were seeking meaning in their lives and were assigned to the control condition seemed to suffer losses in their sense of career meaning and advances in depression relative to similar people who were assigned to the workshops.

Discussion

Study 2 tested whether people could satisfy their search for global meaning by being provided with an experimentally enhanced sense of career meaning. There was a tendency for meaning-seekers in workshop conditions to report the greatest increases in levels of calling, and the greatest reductions in depression. Unfortunately, these results were not significant at conventional levels of statistical significance. Because of the small sample size and the number of correlated predictors used in the regression, statistical power is an issue in this study and as a result, possible Type II errors are a concern. Additionally, many of the variables used to indicate post-workshop functioning have high levels of temporal stability and may be highly trait-like and resistant to change (Steger & Kashdan, 2007). It is possible that state versions



Panel A



Panel B

FIGURE 1. Better outcomes among global meaning-seekers assigned to Workshop Conditions than Control Conditions in calling (Panel A) and depression (Panel B), Study 2.

of these measures would have indicated clearer effects of the workshop. Nonetheless, there were some evocative indications that meaning-seekers gained more from career workshops than did other participants, and more than they did from the control condition.

GENERAL DISCUSSION

We argued that meaning matters to people's well-being, whether that meaning is experienced in specific life domains or in a person's life as a whole, and further that relations among domain-specific and global meaning are important to understanding the origins of meaning. Taken together, the two studies described here contribute to the literature showing that people's career attitudes are broadly related to their overall well-being. People who approached their careers as a calling reported greater meaning in life, life satisfaction, and career decision-making efficacy, and fewer depressive symptoms than those who did not approach their work as a calling. As a reflection of career-related meaning, calling demonstrated a similar pattern of relations with these variables as meaning in life did, and the dynamic between the two levels of meaning warrants further empirical and theoretical investigation.

Because of the similarity in how global meaning and career meaning related to well-being and career decision efficacy, it was difficult to determine whether either global- or career-level meaning was most closely tied to these variables. The regressions we conducted to address this question revealed different pictures depending on which dimension of meaning (experiencing vs. seeking) was considered. In the experiencing dimension, global-level meaning in life was a more consistent predictor of life and work functioning than career meaning. In contrast, in the seeking dimension, the level of analysis seemed important; seeking meaning at the career level was more strongly tied to career decision efficacy, whereas seeking meaning at the global level was more strongly tied to well-being at the global level. These results suggest an incremental benefit in identifying on which level people are seeking meaning—in careers or in life.

Beyond the question of how meaning in the career domain and global meaning in life were related to each other and to other variables, we were interested in whether people's search for meaning at one level could be answered by meaning experienced at the other level. Our most consistent finding was that for those seeking global meaning in life, experiencing career meaning improves well-being and people's confidence in their career decisions. Support for this idea was seen most consistently in Study 1, although the trends observed in Study 2 were consistent. Although career-related interventions consisting of four or five sessions are most effective (Brown & Ryan Krane, 2000), the two sessions used in Study 2 provided some evidence that experimentally induced career meaning might help people seeking global life meaning to increase career meaning and decrease depressive symptoms.

Future Research

The present research examined the intersection of two understudied constructs: search for meaning and calling. Although the search for meaning has

long been regarded as important to human welfare, it has received limited empirical scrutiny (Steger et al., 2008). The present findings add to a growing body of evidence indicating that the search for meaning has important implications for human functioning as a motivator. This basic existential motivation also manifested in the work domain in the form of calling-seeking. Analogous to global meaning-seeking, calling-seeking is related to less desirable functioning in careers (Duffy & Sedlacek, 2007). However, future research needs to explore the psychological features, origins, and consequences of seeking meaning in work and in life.

The present study examined top-down and bottom-up dynamics in the context of a single domain: career. It is likely that dynamics similar to those identified here exist within other domains, such as relationships, religion, health, and recreation. Other domains of meaning should therefore be examined. Such research might proceed from an assumption of a hierarchical structure to meaning, with domains of meaning constituting a lower level beneath the broader experience of meaning in life as a whole. It is also possible, and perhaps even likely, that interactions exist among domains. For example, someone could experience a synergistic interaction of career, relationships, and religion by pursuing work in a religious vocation (e.g. pastor, priest, nun, choir director). Alternatively, someone could experience meaning domain conflicts between career, health, and recreation by accepting a job that consumes too much energy and time, leaving insufficient time for health-supportive activities (e.g. jogging, swimming, working out). Assessing meaning in multiple domains could reveal such synergistic or conflicting dynamics.

Limitations

The present research was conducted with college students. The results are encouraging and support the importance of examining work-related variables among people who are preparing for work, rather than firmly entrenched within enduring career paths. However, it is not clear whether the dynamics uncovered would be the same among working adults. Perhaps for them, the desire for meaningful work might be more easily satisfied by meaning experienced in other domains such as parenting, religion, or leisure pursuits. Working adults may have a less idealistic attitude toward work, viewing work as a means to a paycheck rather than as a means to purpose in life. No previous research has compared levels of work meaning between college students and working adults, so such alternatives remain speculative.

A second limitation to the present research is the use of a measure of calling as an indicator of work meaning. The MLQ subscales could have been adapted to ask simply about meaning in *work* rather than meaning in *life*. We regard the use of a calling measure as a conservative test of the relations

between work meaning and life meaning in that the scale items do not share similar linguistic stems. It is not clear to what degree calling is identical to “work meaning”. Certainly, the notion of calling encompasses meaning in work, but it also reflects other constructs as well, such as the presence of an external summons (such as from God) to a career. Therefore, future research should attempt to replicate the present findings using measures that allow more parallel analyses across the global and domain-specific levels.

This research also was limited in that the measures of positive functioning on the global and career domain levels were not parallel to each other. On the global level, we assessed depression and life satisfaction, whereas on the career level we assessed career decision-making efficacy. Because it was unlikely that many in the present samples were working in their desired careers, career decision-making efficacy provides a good indicator of how well participants were functioning in terms of their career decision-making. However, it may be that some of our findings were influenced by having different outcome variables at the global and domain-specific levels. Future research should incorporate parallel measures. For example, people could indicate their satisfaction with important relationships, the level of stress they experience, or how much autonomy they have both at work and in their lives as a whole.

Just as many people are highly motivated to search for meaning in their lives, there are also people who are highly motivated to find meaningful work, involvement in valued social causes, or ways to use their leisure time meaningfully. Others may be seeking ways in which they can establish romantic relationships or start a family. The present studies suggest that experiencing meaning in life as a whole may not adequately satisfy motivations for meaning in specific domains. However, the potential exists for each of these pursuits to provide people with meaningful experiences. Significant experiences in career, social, leisure, or relational domains might form the building blocks of the purpose and coherence that lend a meaningful structure to life, and may provide glimpses of how our lives transcend chaos. The present studies implicate seeking and experiencing meaning in life’s domains as potential answers to the question of where meaning in life originates.

ACKNOWLEDGEMENT

This research was supported by a grant from the Lilly Foundation through the John Ireland Initiative at the University of St Thomas.

REFERENCES

- Aiken, L.S., & West, S.G. (1991). *Multiple regression: Testing and interpreting interactions*. Newbury Park, CA: Sage.

- Arnett, J.J. (2000). Emerging adulthood: A theory of development from the late teens through the twenties. *American Psychologist*, *55*, 469–480.
- Baron, R.M., & Kenny, D.A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, *51*, 1173–1182.
- Baumeister, R.F. (1991). *Meanings of life*. New York: Guilford.
- Betz, N.E., Klein, K.L., & Taylor, K.M. (1996). Evaluation of a short form of the Career Decision-Making Self-Efficacy Scale. *Journal of Career Assessment*, *4*, 47–57.
- Brown, S.D., & Ryan Krane, N.E. (2000). Four (or five) sessions and a cloud of dust: Old assumptions and new observations about career counseling. In S.D. Brown & R.W. Lent (Eds.), *Handbook of counseling psychology* (3rd edn., pp. 740–766). New York: Wiley.
- Bugental, J.F.T. (1965). *The search for authenticity*. New York: Holt, Rinehart, & Winston.
- Cummins, R. (1996). The domains of life satisfaction: An attempt to order chaos. *Social Indicators Research*, *38*, 303–328.
- Deci, E.L., Ryan, R.M., Gagné, M., Leone, D.R., Usunov, J., & Kornazheva, B.P. (2001). Need satisfaction, motivation, and well-being in the work organizations of a former Eastern bloc country: A cross-cultural study of self-determination. *Personality and Social Psychology Bulletin*, *27*, 930–942.
- Derogatis, L.R., & Spencer, M.S. (1982). *The Brief Symptom Inventory: Administration, Scoring and Procedures Manual-I*. Baltimore, MD: Johns Hopkins University School of Medicine, Clinical Psychometrics Research Unit.
- Diener, E., Emmons, R.A., Larson, R.J., & Griffin, S. (1985). The Satisfaction with Life Scale. *Journal of Personality Assessment*, *49*, 71–75.
- Diener, E., Suh, E.M., Lucas, R.E., & Smith, H.L. (1999). Subjective well-being: Three decades of progress. *Psychological Bulletin*, *125*, 276–302.
- Dik, B.J., & Duffy, R.D. (2009). Calling and vocation at work: Definitions and prospects for research and practice. *The Counseling Psychologist*, *37*, 424–450.
- Dik, B.J., Sargent, A., & Steger, M.F. (2008). Career development strivings: Assessing goals and motivation in career development. *Journal of Career Development*, *35*, 23–41.
- Dik, B.J., & Steger, M.F. (2008). Randomized trial of a calling-infused career workshop incorporating counselor self-disclosure. *Journal of Vocational Behavior*, *73*, 203–211.
- Duffy, R.D., & Sedlbeck, W.E. (2007). The presence of and search for a calling: Connections to career development. *Journal of Vocational Behavior*, *70*, 590–601.
- Gushue, G.V., Scanlan, K.R.L., Pantzer, K.L., & Clarke, C.P. (2006). The relationship of career decision-making self-efficacy, vocational identity, and career exploration behavior in African American high school students. *Journal of Career Development*, *33*, 19–28.
- Hall, D.T., & Chandler, D.E. (2005). Psychological success: When the career is a calling. *Journal of Organizational Behavior*, *26*, 155–176.
- Headey, B., Veenhoven, R., & Wearing, A. (1991). Top-down versus bottom-up theories of subjective well-being. *Social Indicators Research*, *24*, 81–100.

- King, L.A., Hicks, J.A., Krull, J.L., & Del Gaiso, A.K. (2006). Positive affect and the experience of meaning in life. *Journal of Personality and Social Psychology, 90*, 179–196.
- Krause, N. (2004). Stressors arising in highly valued roles, meaning in life, and the physical health status of older adults. *Journal of Gerontology: Social Sciences, 59B*, S287–S297.
- Paulsen, A.M., & Betz, N.E. (2004). Basic confidence predictors of career decision-making self-efficacy. *Career Development Quarterly, 52*, 354–362.
- Pavot, W., & Diener, E. (1993). Review of the Satisfaction with Life Scale. *Psychological Assessment, 5*, 164–172.
- Prager, E. (1998). Observations of personal meaning sources for Israeli age cohorts. *Aging & Mental Health, 2*, 128–136.
- Rojas, M. (2006). Life satisfaction and satisfaction in domains of life: Is it a simple relationship? *Journal of Happiness Studies, 7*, 467–497.
- Ryff, C.D., & Singer, B. (1998). The contours of positive human health. *Psychological Inquiry, 9*, 1–28.
- Steger, M.F. (in press). Meaning in life. In S.J. Lopez (Ed.), *Handbook of positive psychology* (2nd edn.). Oxford: Oxford University Press.
- Steger, M.F., Frazier, P., Oishi, S., & Kaler, M. (2006). The Meaning in Life Questionnaire: Assessing the presence of and search for meaning in life. *Journal of Counseling Psychology, 53*, 80–93.
- Steger, M.F., & Kashdan, T.B. (2007). Stability and specificity of meaning in life and life satisfaction over one year. *Journal of Happiness Studies, 8*, 161–179.
- Steger, M.F., Kashdan, T.B., Sullivan, B.A., & Lorentz, D. (2008). Understanding the search for meaning in life: Personality, cognitive style, and the dynamic between seeking and experiencing meaning. *Journal of Personality, 76*, 199–228.
- Wrzesniewski, A., McCauley, C., Rozin, P., & Schwartz, B. (1997). Jobs, careers, and callings: People's relations to their work. *Journal of Research in Personality, 31*, 21–33.