

**SEARCHING FOR MEANING IN LIFE: THE MODERATING ROLES OF
HOPE AND OPTIMISM**

by

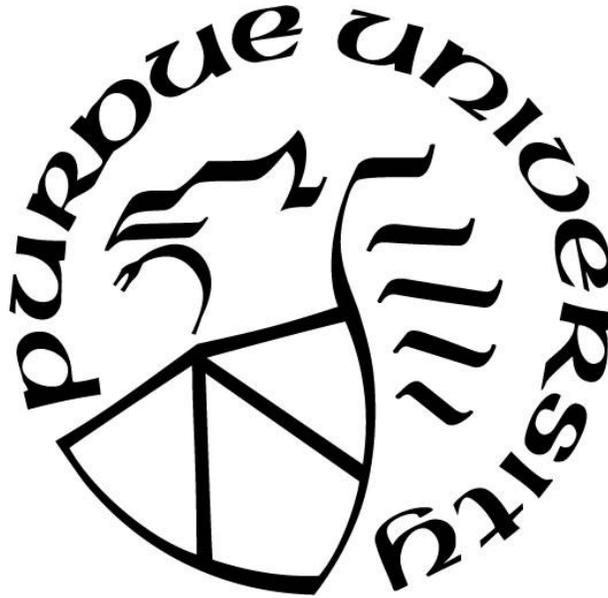
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ABSTRACT

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While research links the presence of meaning in life to better psychological well-being, the relationship between the search for meaning and psychological well-being is less clear. The search for meaning is generally thought to be psychologically distressing, but there is evidence that this process is moderated by the presence of meaning in life. Because the search for meaning in life can be considered a goal pursuit, goal-related personality traits may also moderate the relationship between the search for meaning and psychological well-being. The first aim of this cross-sectional study was to replicate the moderating effect of the presence of meaning on the relationship between the search for meaning and psychological well-being in a sample of undergraduates ($N = 246$). The second aim was to examine the potential moderating effects of hope and optimism on these relationships. As an exploratory third aim, this study examined whether there was a unique combination of the presence of meaning, the search for meaning, and hope or optimism that differentially predicted psychological well-being. Results suggest that optimism and the presence of meaning, but not hope, are significant moderators of the relationship between the search for meaning and psychological well-being. Implications and limitations of these findings are discussed.

INTRODUCTION

Human beings have a strong desire to understand their existence and to develop a sense of meaning in life. Historically, these efforts have been discussed within the realms of philosophy, theology, and literature (e.g., Camus, 1965; Heidegger, 1962; Kierkegaard, 1946; Tillich, 1952). However, recent efforts within the fields of psychology and psychiatry have shown meaning in life to be an important aspect of psychological well-being and quality of life (Breitbart et al., 2010; Frankl, 1963; Steger, Frazier, Oishi, & Kaler, 2006; Yalom, 1980). Meaning in life has been defined in several ways (Battista & Almond, 1973; Crumbaugh & Maholick, 1964; Reker & Wong, 1988), and different theories have been developed to explain how it is achieved (Frankl, 1963; Ryff & Singer, 1998; Seligman, 2002; Yalom, 1980). The most common definition of meaning in life centers around the ideas of coherence (i.e., the extent to which one's life makes sense) and purpose (i.e., the extent to which one has important aspirations for life; Martela & Steger, 2016). Within psychology, the study of meaning in life has focused primarily on the benefits of having meaning (i.e., *the presence of meaning*; Battista & Almond, 1973; Crumbaugh & Maholick, 1964; Reker & Peacock, 1981; Martela & Steger, 2016).

Research shows that greater meaning in life is associated with greater life satisfaction (Chamberlain & Zika, 1988; Peterson, Park, & Seligman, 2005), greater happiness (Debats, van der Lubbe, & Wezeman, 1993), and greater positive affect (Zika & Chamberlain, 1992). Conversely, less meaning in life is linked to higher general anxiety (Debats et al., 1993), higher death anxiety (Juhl & Routledge, 2016; Yalom, 1980), higher levels of depressive symptoms and boredom (Fahlman, 2009; Kleftras & Psarra, 2012), and more frequent substance use (Schnitzer et al., 2013). In general, the presence of meaning in life is associated with better

overall well-being. However, less is known about the psychological correlates associated with *the search for meaning*.

Steger and colleagues (2006) examined the nature of meaning in life by focusing on two distinct dimensions: the presence of meaning and the search for meaning. The presence of meaning is defined as “the sense made of, and significance felt regarding, the nature of one’s being and existence” (Steger et al., 2006, p. 81). The search for meaning is defined as “the drive and orientation toward finding meaning in one’s life” (Steger et al., 2006, p. 85) and can be thought of as a valued goal pursued in favor of future meaning (Emmons, 2005; Steger, Kawabata, Shimai, Otake, 2008a).¹ Research does not support the commonly-held belief that individuals only search for meaning when they feel without it. In fact, the presence of meaning and the search for meaning are often found to be unrelated (Steger et al., 2006). Some individuals search for meaning when they report having a high presence of meaning, and some individuals do not search for meaning even when they report a low presence of meaning (Dezutter, Waterman, Schwartz, et al., 2014; Steger et al., 2006).

The nature of the relationship between the search for meaning and psychological well-being is unclear. Some research has linked the search for meaning to worse psychological well-being (Steger et al., 2006; Steger et al., 2008b; Steger, Mann, Michels, & Cooper, 2009). For example, it has been shown to be negatively correlated with life satisfaction and positively correlated with depressive symptoms (Steger et al., 2006; Steger & Kashdan, 2007). However, it has also been shown to be associated with better psychological well-being. For instance, the search for meaning has also been shown to be positively correlated with life satisfaction, open-

¹ The search for meaning and the “sense made of” one’s life should not be confused with processes of “meaning-making” (Park & Folkman, 1997) or “benefit-finding” (Affleck & Tennen, 1996) that occur in response to an adverse event. Regarding the latter, the process of searching for meaning refers to a particular event rather than an evaluation of one’s life in general.

mindedness, curiosity, and positive affect (Isik & Uzbe, 2015; Ju, Shin, Kim, Hyun, & Park, 2013; Steger et al., 2008b). One reason for these mixed findings may be the multidimensional nature of psychological well-being. Positive and negative aspects of psychological well-being do not exist on a single continuum; the presence of well-being is not the same as the absence of distress (Watson, Clark, & Tellegen, 1988). Therefore, the search for meaning may be differentially associated with both good and bad outcomes. Another reason for these mixed findings may be that the relationship between the search for meaning and psychological well-being varies with the presence of a third variable. Indeed, there is some evidence to suggest that these relationships are moderated by the presence of meaning in life (e.g., Steger, Oishi, & Kesebir, 2011).

For example, greater presence of meaning has been shown to weaken the positive relationship between the search for meaning and anxiety (Steger et al., 2009). In addition, the search for meaning has been shown to be positively associated with psychological well-being (e.g., greater life satisfaction, greater happiness, and fewer depressive symptoms) for those who reported greater presence of meaning (Cohen & Cairns, 2012; Park, Park, & Peterson, 2010). This relationship was reversed for individuals who reported less meaning in life (Park, Park, & Peterson, 2010). Furthermore, individuals who report a low presence of meaning often seem to be happier when they do *not* search for meaning (Cohen & Cairns, 2012; Steger et al., 2011), although it has also been found that those who reported both a low presence of meaning and a low search for meaning experienced the worst psychological well-being (i.e., low life satisfaction and more depressive symptoms; DeZutter, Waterman, Schwartz et al., 2014).

These findings suggest that the relationship between the searching for meaning and psychological well-being may be conditional on other factors. Because the search for meaning

can be considered a valued goal pursuit (Steger et al., 2008a), goal-related personality traits (e.g., hope and optimism) may also influence its relationship with psychological well-being.

Self-regulation theory (SRT) posits that human behavior is organized around the pursuit of desired goals and progress toward these goals (or lack thereof) influences psychological well-being (Carver & Scheier, 1998). According to SRT, goals are arranged hierarchically. Higher-order goals are broad and abstract and focus on issues related to a person's sense of self. Lower-order goals are broad and abstract and focus on issues related to a person's sense of self. Lower-order goals can be thought of as specific steps or tasks that lead to higher-order goals. As an example, an individual may choose to eat several servings of vegetables each day (a lower-order goal) in service of greater health and longevity (a higher-order goal). Consistent with SRT, the ultimate function of all goal pursuits is to give purpose and meaning to life (Carver & Scheier, 1998). In other words, meaning in life can be thought of as the highest-order goal, and the search for meaning may be influenced by factors known to be related to goal pursuits in general. Consequently, two SRT-relevant factors (e.g., hope and optimism) may impact the relationship between the search for meaning and psychological well-being.

Hope is defined as an individual's perceived ability to accomplish goals (Snyder, 1994) and is made up of two interrelated cognitive processes: pathways and agency. *Pathways* is the perceived ability to generate strategies or routes connecting the present to a desired goal. *Agency* is the perceived ability to motivate oneself to use pathways to reach a goal. It often manifests as positive self-talk (e.g., "You can do it!"; Snyder, 2002). Although distinct, pathways and agency operate in tandem to influence the outcomes of goal pursuits. For example, the generation of routes or strategies increases one's sense of agency which, in turn, leads to the development of additional strategic planning.

Higher-hope individuals tend to pursue goals more energetically and with greater

confidence than their lower-hope counterparts, which leads to the greater likelihood of achieving goals (Snyder et al., 1991). In one study of undergraduates, students with higher levels of hope were shown to achieve their goals more frequently than their lower-hope counterparts, regardless of goal content or type (Feldman, Rand, & Kahle-Wroblewski, 2009). A likely mechanism for this is that, when problems arise, people who are high in hope develop alternative routes to pursue their goals (pathways) and sustain positive self-talk to maintain motivation (agency; Snyder, 2002). It is possible that hope influences the relationship between the search for meaning and psychological well-being by making the search for meaning seem more obtainable.

Higher-hope individuals also have better life outcomes and overall psychological well-being. High levels of hope have been linked to higher graduation rates (Snyder et al., 1991), better athletic performance (Curry & Snyder, 2000), and better physical and psychological adjustment (Barnett, 2014). People who are high in hope cope better with stressful events and physical illnesses, such as cancer (Ciarrochi, Heaven, & Davies, 2007; Irving, Snyder, & Crowson, 1998), and experience higher levels of confidence and life satisfaction (Snyder et al., 1991). In addition, they grow more frequently from adversity (Tennen & Affleck, 1999), have lower levels of depressive symptoms and anxiety (Feldman & Snyder, 2005; Kwon, 2000), and report a greater frequency and intensity of positive emotions (Snyder et al., 1996). As a result, hope may buffer against the distress that often accompanies the search for meaning in life.

Optimism is the trait belief that good, as opposed to bad, things will happen in the future (Scheier & Carver, 1985). It can be thought of as a sense of confidence (vs. doubt) pertaining to goals and life more generally (Carver, Scheier, & Segerstrom, 2010). In most situations, optimists expect a positive outcome.

Individuals who expect a positive outcome in any given situation are likely to endure

impediments and setbacks for longer than those who expect a negative outcome. Not surprisingly, research has shown that optimists are more committed to their goals and are more likely to persevere in the face of obstacles (Carver et al., 2010; Segerstrom & Nes, 2006). With regard to the search for meaning, optimists may anticipate a successful search and this appraisal may embolden their efforts and increase perceived obtainability.

Optimism appears to be related to better mental and physical health (Rasmussen, Scheier, & Greenhouse, 2009; Shnek, Irvine, Stewart, & Abbey, 2001). For example, in two studies of students transitioning to college, higher optimism predicted lower levels of stress and depressive symptoms at the end of the first semester (Aspinwall & Taylor, 1992; Brissette et al., 2002). Additionally, optimism has been shown to be positively correlated with life satisfaction, and negatively correlated with depressive symptoms in both adults and college students (Ayyash-Abdo, & Alamuddin, 2007; Chang, 1998; Chang & Sanna, 2001). Accordingly, optimists may be better equipped to handle the distress and uncertainty that accompanies the search for meaning in life.

Hope and optimism are similar. Both are future-oriented cognitive expectancies, and both have been shown to be associated with goal pursuits and goal success. However, there are notable distinctions between the two constructs (Bryant & Cvenegros, 2004; Gallagher & Lopez, 2009). One important difference is that hope focuses on what a person can do to achieve desired goals, whereas optimism identifies a general expectation that positive events will occur, regardless of personal control (Rand, 2009). Because of this, hope and optimism may differentially influence the relationships between the search for meaning and psychological well-being. At present, however, there is a paucity of research examining how these two goal-related personality traits relate to meaning in life, and the little research that does exist has neglected the

search for meaning almost entirely.

The majority of research on hope and meaning in life has examined the two as distinct predictors of psychological well-being (Halama & Dedova, 2007; Riaz, Riaz, & Batool, 2014; Vela, Lu, Lenz et al., 2016), although some research has examined how hope and meaning in life are related to each other (Dogra, Basu, & Das, 2011; Feldman & Snyder, 2005; Mascaro & Rosen, 2005; Yalcin & Malkoc, 2015). There has been no research examining how hope might influence the relationship between meaning in life, particularly the search for meaning, and psychological well-being. Thus, the nature of the relationship between hope and meaning in life remains unknown.

The majority of research on optimism and meaning in life has examined how the two mediate the other's relationship with psychological well-being (Ju et al., 2013; Krok, 2015; Shao, Zhang, Lin, Shen, & Li, 2014; Yee Ho, Cheung, & Cheung 2010). This research has been conducted on populations outside of the United States and with varied conceptualizations. For example, some studies have identified optimism as a mediator of the relationship between meaning in life and psychological well-being (Krok, 2015; Yee et al., 2010). Conversely, other studies have identified meaning in life as a mediator of the relationship between optimism and psychological well-being (Ju et al., 2013; Shao et al., 2014). However, no research has examined whether optimism influences (i.e., moderates) the relationship between the search for meaning and psychological well-being.

Considering the current state of the literature, additional research is needed to examine how hope and optimism might influence the relationship between the search for meaning and psychological well-being. This research should consider the multidimensional nature of well-being, which encompasses both positive and negative aspects of cognition and affect (Kern,

Waters, Adler, & White, 2015; Watson, Clark, & Tellegen, 1988). Reductions in positive aspects of psychological well-being may be unassociated with the presence of, or increases in, negative aspects of psychological well-being. Accordingly, hope or optimism may influence the relationship between the search for meaning and psychological well-being, and these effects may differ across different aspects of positive and negative psychological well-being.

PRESENT STUDY

The purpose of the present study was to clarify the relationships between the search for meaning and different aspects of psychological well-being (i.e., positive and negative affect, depressive symptoms, and life satisfaction), as well as determine if certain relevant factors (i.e., presence of meaning, hope, optimism) moderated these relationships. First, I attempted to replicate and extend previous research by examining the presence of meaning as a moderator of the relationship between the search for meaning and psychological well-being. Second, I examined whether hope and optimism were moderators of the relationships between the search for meaning and psychological well-being. Finally, I examined whether there was a unique combination of the presence of meaning, the search for meaning, and hope or optimism that differentially predicted psychological well-being.

Research Questions and Hypothesis

Research Question #1: Does the presence of meaning moderate the relationships between the search for meaning and aspects of psychological well-being?

Hypothesis 1.1: Based on previous research (Cohen & Cairns, 2012; Park et al., 2010; Steger et al., 2008; Steger et al., 2009; Steger et al., 2011), I expected the presence of meaning to moderate the relationship between the search for meaning and psychological well-being. Specifically, I predicted that high search for meaning would be related to better psychological well-being (i.e., more positive affect, less negative affect, fewer depressive symptoms, and greater life satisfaction), but only among individuals who were high in the presence of meaning. For individuals low in the presence of meaning, I predicted the search for meaning to be related to

worse psychological well-being (i.e., less positive affect, more negative affect, more depressive symptoms, and lower life satisfaction).

Research Question #2: Do hope or optimism moderate the relationships between the search for meaning and aspects psychological well-being?

Hypothesis 2.1: I predicted high search for meaning to be related to better psychological well-being (i.e., more positive affect, less negative affect, fewer depressive symptoms, and greater life satisfaction), but only among individuals who were high in hope. For those low in hope, I predicted high search for meaning to be related to worse psychological well-being (i.e., less positive affect, more negative affect, more depressive symptoms, and lower life satisfaction).

Hypothesis 2.2: Similarly, I predicted high search for meaning to be related to better psychological well-being (i.e., more positive affect, less negative affect, fewer depressive symptoms, and greater life satisfaction), but only among individuals who were high in optimism. For those low in optimism, I predicted high search for meaning to be related to worse psychological well-being (i.e., less positive affect, more negative affect, more depressive symptoms, and lower life satisfaction).

Research Question #3: Is there a unique combination of hope/optimism and the presence and search for meaning (i.e., hope/optimism X presence X search) that differentially predicts aspects of psychological well-being?

Hypothesis 3.1: This question was exploratory in nature. As such, I had no a priori hypotheses.

METHODS

Study Design and Sample

This study was a secondary analysis using data originally collected for a scale validation. The original study was a cross-sectional design. Hope, optimism, the presence of meaning, and the search for meaning were included as predictor variables.² Life satisfaction, positive affect, negative affect, and depressive symptoms were included as outcome variables. These measures were selected because they suitably encapsulate the multidimensional nature of psychological well-being which includes positive and negative aspects of cognition and affect. The original study protocol was approved by the Institutional Review Board (IRB) of Indiana University – Purdue University at Indianapolis (IUPUI).

Participants ($N = 246$) were recruited from undergraduate psychology courses at IUPUI. After providing informed consent, participants anonymously completed self-report surveys online, which included measures of demographic information, goal-related personality traits, and positive and negative aspects of psychological well-being. Responses were provided in exchange for course credit. Only students who were 18 years or older and enrolled in undergraduate psychology courses were eligible for participation in this study.

² The original study included several other measures that will not be included in this analysis. These included measures of: self-efficacy, self-esteem, attachment, coping, and anxiety.

Measures

Hope

Hope was assessed using the Adult Hope Scale (AHS; Snyder et al., 1991), a 12-item self-report measure of trait hope. Four items assess pathways thinking (e.g., “I can think of many ways to get the things in life that are important to me”) and four items assess agency thinking (e.g., “My past experiences have prepared me well for my future”). Four items are distractors. Participants are asked to rate on an 8-point Likert-type scale (1 = Definitely false to 8 = Definitely true) the extent to which each statement describes them in general. The AHS generates a total hope score as well as separate subscales for pathways and agency. Higher scores indicate greater levels of hope. The AHS has been shown to be temporally reliable and valid (Snyder, et al., 1991).

Cronbach’s alpha for total hope in this study was .89.

Optimism

Optimism was assessed using the Life Orientation Test-Revised (LOT-R; Scheier, Carver, & Bridges, 1994), a 10-item self-report measure of trait optimism. Six items assess optimism (e.g., “Overall, I expect more good things to happen to me than bad”) and four are distractor items. Participants are asked to rate on a 5-point Likert-type scale (0 = Strongly disagree to 4 = Strongly agree) the extent to which each statement describes them in general. Higher scores indicate greater levels of optimism. The LOT-R has been shown to be temporally reliable and valid (Scheier et al, 1994). Cronbach’s alpha for the LOT-R in this study was .81.

Meaning in life

Meaning in life was assessed using the Meaning in Life Questionnaire (MLQ; Steger et al., 2006), a 10-item self-report measure. Five items assess the presence of meaning in life (e.g., “I have a good sense of what makes my life meaningful”) and five items assess the search for

meaning in life (e.g., “I am always looking to find my life’s purpose”). Participants are asked to think about what makes their lives important and are told that there are no right or wrong answers. Responses are rated on a 7-point Likert-type scale (1 = *Absolutely untrue* to 7 = *Absolutely true*). Higher scores on both measures indicate higher levels of presence or search. The MLQ has been shown to be temporally reliable and valid (Steger et al., 2006). Cronbach’s alpha for the presence and search subscales in this study were .91 and .88, respectively.

Depressive symptoms

Depressive symptoms were assessed using the Beck Depression Inventory-II (BDI-II; Beck, Steer, & Brown, 1996), a 21-item self-report measure of cognitive, affective, and psychomotor depressive symptoms (e.g., “I am less interested in other people or things than before”). Each question on the BDI-II has an ordered-response format that ranges in severity (e.g., 0 = *I do not feel sad* to 3 = *I am so sad or unhappy I can’t stand it*). Participants are asked to choose which statement best describes how they have been feeling over the last two weeks. Higher scores on the BDI-II indicate higher levels of depressive symptoms. The BDI-II has been shown to be reliable and valid (Beck et al., 1996). Cronbach’s alpha for the BDI-II in this study was .88.

Life satisfaction

Life satisfaction was assessed using the Satisfaction with Life Scale (SWLS; Diener, Emmons, Larsen, & Griffin, 1985), a 5-item self-report measure. All items assess cognitive appraisals of satisfaction with life in general (e.g. “I am satisfied with my life”). Participants are asked to rate the extent to which they agree with each statement on a 7-point Likert-type scale (1 = *Strongly disagree* to 7 = *Strongly agree*). Higher scores indicate higher levels of life satisfaction. The SWLS has been shown to be reliable and valid (Pavot & Diener, 1993). Cronbach’s alpha for the SWLS in this study was .86.

Positive and negative affect

Positive and negative affect were assessed using the Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988), a 20-item self-report measure. Ten items assess positive affect (e.g., “enthusiasm”), and ten items assess negative affect (e.g., “irritable”). For the present study, participants were asked to rate the extent to which they feel certain emotions “currently”. Responses are rated on a 5-point Likert-type scale (1 = *Very slightly* to 5 = *Extremely*). On both scales, higher scores indicate higher levels of affect. The PANAS has been shown to be reliable and valid (Watson et al., 1988). Cronbach’s alpha for the positive and negative affect scales in this study were .92 and .88, respectively.

Data Analysis

To begin, I ran preliminary descriptive statistics to check for outliers and examine distributions for normality and missingness. Normality was defined as having absolute values for skew and kurtosis of < 3.0 and < 10.0 , respectively (Kline, 2015). Outliers were identified by absolute values greater than three standard deviations from the mean. Outliers were winsorized to three standard deviations.³ I also examined the homoscedasticity of the distributions using scatter plots. Preliminary analyses included descriptive statistics (e.g., means, standard deviations) to characterize sample demographics and study variables.

To address my research questions, I used SPSS and the PROCESS macro (Hayes, 2013). See Table 4 for a list of all moderation analyses conducted.

³ I ran planned analyses first with winsorized values and again using the original outliers included to examine the robustness of my results (Hastings, Mosteller, Tukey, & Winsor, 1947). There were no differences in results when analyses were ran with winsorized and non-winsorized outliers.

RESULTS

Data cleaning

Of the 246 participants included in the sample, 46 (18.6%) had some missing data. Eleven participants were missing five or more individual items (6% of total responses). Little's MCAR test determined missing items to be missing completely at random $\chi^2 = 2591.797$ ($df = 2589$, $p = .481$).⁴ Out of the eleven participants who were missing five items or more, six participants were excluded from the analyses because they had substantial missingness (i.e., missing 50% or more of a measure). In all cases but one, these participants were excluded because they were missing at least one entire measure.⁵ The remaining five participants were included in the analyses because they were not missing more than 50% on any single measure. In total, 40 of the 46 participants with missing data had missing responses imputed. For all of these items, missing values were imputed using the participant's mean score on that measure.⁶

The data were then examined for outliers. Standardized scores were created for all variables, and all z-scores above the absolute value of 3.0 were winsorized to three standard deviations. In total, seven scale scores were winsorized (two hope scores, two optimism scores, and three BDI scores).

Next, all continuous variables were examined for skew and kurtosis (see Table 2). All

⁴ Independent samples t-tests and chi-squared tests were also ran to assess for any differences between those with missing data and those with complete data. This was done in two ways: 1.) by comparing those with any missing data to those with only complete data and 2.) by comparing those with some missing data (5% or less) to those with only complete data. In both cases, no significant differences were found between groups (at $p < .01$).

⁵ One participant was deleted because they were missing nine items from the BDI. Although technically less than 50% of the measure, I decided that this amount of missingness would not allow for an accurate imputation.

⁶ Although there is some debate as to whether Likert scales can ever be treated as continuous variables (Jamieson, 2004), items on the BDI, in particular, appear to be ordinal in nature, rather than interval. That is, responses appear to tap qualitative evaluations of particular symptoms, rather than a continuum of severity. Because of this, I ran a sensitivity analysis comparing my results when missing items on the BDI were imputed using the mean and when they were imputed using the mode. The results were not significantly different. Thus, I decided to be uniform in my imputation method and used the mean for all imputations.

variables were approximately normally distributed, with the absolute values of skew and kurtosis being < 3.0 and < 10.0 , respectively (Kline, 2015). Finally, all scatterplots revealed the residuals of each of the DVs to have similar variances at each level of the IVs.

Descriptive Analyses

Final analyses included 240 participants. Participants were mostly white (79%) and female (72%). The median age was 21.19 years (see Table 1 for demographic information). Scale means and standard deviations are presented in Table 2. Zero-order correlations between predictor and outcome variables are presented in Table 3. A summary of all significant moderation analyses is presented in Table 5.

Hypothesis Testing

Research Question #1

For three out of the four outcome variables, the presence of meaning did not moderate the relationship between the search for meaning and psychological well-being (see Tables 6, 7, and 8). However, the presence of meaning did moderate the relationship between the search for meaning and negative affect ($b = .02, p = .043$; see Table 9).⁷ To explore this moderating effect, I plotted the relationship between the search for meaning and negative affect for low (1 SD below the mean) and high (1 SD above the mean) levels of the presence of meaning (Hayes, 2013). As shown in Figure 1, the search for meaning was positively related to negative affect. However, this relationship was stronger for those low in the presence of meaning ($b = .41, p < .05$). In fact, the relationship between the search for meaning and negative affect became non-significant at

⁷ All coefficients represent unstandardized values and were mean-centered prior to analyses to ease interpretation.

high levels of the presence of meaning ($b = .13, p > .05$; see Table 10). Consistent my hypothesis, the presence of meaning appeared to buffer some of the emotional distress associated with an active search for meaning in life.

Research Question #2

For three out of the four outcome variables, neither hope nor optimism moderated the relationship between the search for meaning and psychological well-being (see Tables 11, 12, and 13). However, optimism moderated the relationship between the search for meaning and positive affect (see Table 14). To explore this moderating effect, I plotted the relationship between the search for meaning and positive affect for low (1 SD below the mean) and high (1 SD above the mean) levels of optimism while holding hope constant at average levels. As shown in Figure 2, when controlling for hope, there was a positive association between the search for meaning and positive affect for those who were high in optimism ($b = .18$). Conversely, when controlling for hope, there was a negative association between the search for meaning and positive affect for those who were low in optimism ($b = -.20$).⁸ This suggests that the search for meaning in life is more positive for those who generally expect good things to happen and less positive for those who generally expect bad things to happen.

Research Question #3

Research Question #3 was exploratory in nature. It addressed whether the relationship between the search for meaning and psychological well-being was conditional on more than one moderator (i.e., the presence of meaning and hope, or the presence of meaning and optimism). The majority of analyses did not yield significant three-way effects (see Tables 15, 16, 17, 18,

⁸ Although there was a significant interaction effect, neither of the simple slopes representing 1 SD above and below the mean were significant at $p < .05$.

and 19). However, moderating effects were found between the search for meaning, the presence of meaning, and optimism on depressive symptoms, life satisfaction, and positive affect. The significant three-way interaction (see Table 20) between the search for meaning, the presence of meaning, and optimism in predicting depressive symptoms is plotted in Figure 3. As can be seen, the search for meaning was positively related to depressive symptoms. However, this relationship was stronger at different levels of optimism and the presence of meaning. When individuals were confident that things would work out (i.e., they were average or high in optimism), the presence of meaning moderated the relationship between the search for meaning and depressive symptoms. For example, when individuals were high in optimism and high in the presence of meaning, a buffering effect occurred such that an active search for meaning was related to only a minor increase in depressive symptoms ($b = .19, p < .05$). In this case, the awareness that one's life is meaningful may reaffirm the general assumption that positive outcomes will continue to emerge in the future, which, in turn, may mitigate the uncertainty and distress that can arise from an active search for meaning. Differently, when individuals were high in optimism and *low* in the presence of meaning, an exacerbating effect occurred such that an active search for meaning was related to a substantial increase in depressive symptoms, nearly to the point that the search for meaning and depressive symptoms became redundant ($b = .96, p < .05$). In this instance, the contrast between a positive future expectancy and a relatively meaningless existence may make searching for meaning particularly depressing.

The significant three-way interaction (see Table 21) between optimism, the presence of meaning, and the search for meaning in predicting life satisfaction is plotted in Figure 4. The results suggest that, when individuals do not necessarily assume that positive outcomes will occur in the future (i.e., they were low or average in optimism), the search for meaning was

negatively related to life satisfaction. This search was most strongly related to life satisfaction in cases where individuals were low in optimism and high in the presence of meaning ($b = -.24, p < .05$). For these individuals, the decision to search for additional meaning in life may lead to reduced life satisfaction because these efforts seem unlikely to succeed.

The significant three-way interaction (see Table 22) between optimism, the presence of meaning, and the search for meaning in predicting positive affect is plotted in Figure 5. The results suggest a unique combination of optimism and the presence of meaning such that, when individuals are high in the presence of meaning but low in optimism, the search for meaning is negatively associated with positive affect ($b = -.46, p < .05$). Here, when one already has meaning but desires more, the expectation that things will not work out may dampen some of the positive feelings (e.g., enthusiasm) that might otherwise accompany a new, and potentially exciting, endeavor.

DISCUSSION

This study examined the relationships between the search for meaning and different aspects of psychological well-being (i.e., depressive symptoms, satisfaction with life, positive affect, and negative affect) in a sample of undergraduates. I examined the extent to which the search for meaning might differentially relate to these aspects and the extent to which these relationships might be moderated by other factors (i.e., the presence of meaning, hope, and optimism). The results partially supported my hypotheses. Both the presence of meaning and optimism moderated some of these relationships; however, hope did not. These results suggest a complex relationship between the search for meaning and psychological well-being. They also shed light on the implications of searching for meaning in life, demonstrating that it more consistently predicts negative aspects of psychological well-being than positive aspects.

The presence of meaning moderated the relationship between the search for meaning and negative affect. In this case, the presence of meaning may transform a distressing search into a more benign expansion or revision of existing meaning. As an example, certain individuals may seek to deepen existing sources of meaning in life (e.g., religious faith, interpersonal relationships), and this continued search may not produce momentary distress. This interpretation has been suggested elsewhere (Park, Park, & Peterson, 2010).

On the other hand, the presence of meaning did not moderate the relationships between the search for meaning and depressive symptoms, life satisfaction, and positive affect. One explanation for the relative absence of moderating effects in the current sample is that I may have been underpowered to detect them (Aguinis, 1995). This seems plausible, considering that one of the only other two studies that found a moderating effect of the presence of meaning on the relationship between the search for meaning and psychological well-being in undergraduates

did so in a substantially larger sample ($n = 556$; Steger et al., 2008a). Nevertheless, inadequate statistical power is only one explanation for the relative lack of moderation effects, in part because moderating effects have been found in smaller samples of undergraduates than the current one (Steger et al., 2011). In both of the aforementioned studies, the moderating effect of the presence of meaning was only examined in reference to the relationships between the search for meaning and *positive* aspects of psychological well-being (i.e., happiness and life satisfaction, respectively). To my knowledge, the current study is the first to examine the moderating effects of the presence of meaning on the relationship between the search for meaning and *negative* aspects of psychological well-being in a sample of undergraduates. Consequently, the current results may reflect the true nature of reality for college students, at least in so far as negative aspects of psychological well-being are concerned. That is, when individuals also experience high levels of meaning in life, the search for meaning may not feel momentarily distressing.

The relative absence of moderating effects in the current sample may also have to do with the fact that search for meaning is not always initiated by the desire to adjust existing levels of meaning. College students may search for meaning regardless of its relative presence or absence, in part because this is developmentally appropriate (Arnett, 2000). College is a time of personal expansion and perceived temporal abundance, and students may pursue a variety of different goals, including the search for meaning, as a way to further develop their knowledge of self and the world (Carstensen, 2006). Consequently, the presence of a particular source of meaning (e.g., fulfilling friendships) may have little bearing on the pursuit of a different kind (e.g., the identification of a meaningful future career), or the psychological ramifications therein. Thus, even though the presence of meaning appeared to influence overall well-being in the current

sample (i.e., higher presence of meaning was associated with better psychological well-being), it may have little influence on the search for meaning in this population. In contrast, the search for meaning may be more clearly predicated on the relative presence or absence of meaning in older adults. For example, retirement age adults may only continue to search for meaning in cases where they have yet to identify personal sources of meaning and generativity (Erikson, 1963).

Alternatively, the single significant interaction I identified could have been a false positive resulting from running multiple analyses (i.e., type 1 error; Cohen, 1992). This might explain why the presence of meaning did not moderate the relationship between the search for meaning and depressive symptoms, despite the moderate correlation between depressive symptoms and negative affect. If this effect was, in fact, the result of type 1 error, it would suggest that the relationship between the search for meaning and psychological well-being is relatively straightforward and consistent. In other words, undergraduates' search for meaning may have a similar association with psychological well-being for all students, regardless of their current level of existing meaning.

Ultimately, the results of research question #1 should be interpreted with caution. Additional research with larger samples sizes and different aspects of psychological well-being (e.g., both positive and negative markers) are needed before firm conclusions can be drawn about how the relationship between the search for meaning and psychological well-being is impacted by the presence (or absence) of meaning.

Optimism moderated the relationship between the search for meaning and positive affect. This suggests that, under certain conditions, an active search for meaning may contribute to positive emotions. Searching for meaning in life may feel good when one generally expects positive results (i.e., when one is high in optimism).

However, neither hope nor optimism moderated the relationship between the search for meaning and depressive symptoms, life satisfaction, or negative affect. The relative lack of moderation effects in research question #2 may be explained by how the search for meaning is defined. Although the search for meaning can be considered a type of goal pursuit (Steger et al., 2008a), it is abstract and vague. It may be qualitatively different from other, more specific life goals (e.g., searching for steady employment), which may limit the extent to which goal-related expectancies (i.e., hope and optimism) influence its future attainment. This could explain why hope was not a moderator. Snyder (1991) theorized that hopeful individuals conceptualize goals concretely, with clear and definite markers. This allows them to monitor their progress and take steps that will eventually lead to goal attainment. Individuals' perceived ability to accomplish goals may be less relevant when those goals are not clearly identified or purposely pursued, as may be the case with meaning in life.

There is some evidence to support this idea. In line with the findings of the current study, Cohen and Cairns (2012) did not find self-efficacy to be a moderator of the relationship between the search for meaning and depressive symptoms. Because hope and self-efficacy are both grounded in personal effort (Rand, 2017), these findings suggest that individuals may not view meaning in life as a goal to be actively pursued. If true, this would be in contrast to other theories which suggest that meaning in life develops from the pursuit of valued goals (Feldman & Snyder, 2005; Frankl, 1963). As Cohen and Cairns suggest (2012), individuals may not consider the development of meaning in life to be an achievable goal, but rather something that develops as a result of living life (i.e., a side effect).

The search for meaning in life may not be a "do" goal, which is characterized by specific aims and clearly defined objectives. Rather, it may be more appropriately thought of as a value

or a “be” goal, which emphasizes particular ways of existing, or desiring to exist, in the world (e.g., living in line with one’s ideal self; Carver & Scheier, 1998). This fits with the constructivist nature of the search for meaning (Steger et al., 2006). There is no single source of personal meaning in life, nor are there preordained areas to which one should turn in order to ensure a successful search. Some individuals search for meaning in relationships; others look for it in intellectual endeavors or financial pursuits, and still others search in myriad other places (Schnell, 2009). Even when individuals report having meaning in life, they do not always know how to go about obtaining more (Park, Park, & Peterson, 2010). This ambiguity may explain why optimism attenuated some of the distress that accompanies the search for meaning. Optimism, unlike hope, emphasizes positive outcomes, regardless of personal control (Rand, 2009). Optimistic individuals may expect *all* goals to work out, even if those goals are vaguely defined. Future research should consider this possibility and examine how different conceptualizations of the *goal* of searching for meaning in life might influence its relationship with psychological well-being.

It would be premature to assume that hope and optimism have little influence on the relationships between the search for meaning and psychological well-being. The current study is the first to examine these relationships, and additional research with different samples (e.g., older adults, clinical populations) and other aspects of psychological well-being is needed.

Together, optimism and the presence of meaning moderated the majority of the relationships between the search for meaning and psychological well-being. In contrast, hope and the presence of meaning did not moderate any. The results of research question #3 suggest a complex relationship between the search for meaning and psychological well-being.

When individuals were high in optimism but low in the presence of meaning, greater search for meaning was associated with more depressive symptoms. In contrast, when individuals were low in optimism but high in the presence of meaning, greater search for meaning was associated with less life satisfaction and positive affect. How can we make sense of these relationships? One way is to consider that the search for meaning in life may parallel the development of personal identity (Steger et al., 2006, 2011). Arnett (2000) suggested that identity formation extends from adolescence into the twenties. During this stage of “emerging adulthood”, the exploration of personality identity is predominant. Often, this includes the search for meaning in life (Arnett, 2000; Steger, Oishi, & Kashdan, 2009). Consequently, it may be useful to contextualize the search for meaning in a fashion similar to the search for, and development of, personal identity (Marcia, 1966).

Marcia (1966) outlines four stages of identity formation: diffusion, foreclosure, moratorium, and achievement. Depending on the stage, individuals are further or closer to establishing a unique identity. In the diffusion and foreclosure stages, individuals are not actively exploring various identities. Either they have avoided the issue (i.e., diffusion) or they have relied on others to (temporarily) supply an answer (e.g., parents or other authority figures). In the moratorium stage, individuals are actively pursuing an identity but have not yet settled on one that seems to fit. In the achievement stage, individuals have settled upon a unique personal identity.

Individuals who do not have meaning in life but are actively searching for it may be in the “moratorium stage” of meaning development (Steger et al., 2006). This may be normative during the college years when exposure to certain courses, professors, friendships, or life experiences can act as a precipitant to self-discovery or support students to confront the absence

of meaning in their lives (Shin & Steger, 2016). Assuming the search for meaning resembles the development of identity, this conceptualization would be consistent with research demonstrating that those in the moratorium stage experience psychological discomfort (Kroger, Martinussen, & Marcia, 2010). Counterintuitively, the results of this study suggest that high levels of optimism may not be helpful when individuals are searching to establish meaning for the first time.

This may be because optimists expect things to work out (Carver et al., 2010), and the relative absence of meaning challenges this assumption. Optimists may be surprised to note that they do not already have a sense of meaning in life, in part because their outlook implies the attainment of positive outcomes in the past (e.g., the development of meaning in life). In extreme cases, this appraisal may be so stark that it erodes positive expectations and “shatters” the optimist’s worldview (Janoff-Bulman, 1989). In line with this suggestion, there is some evidence suggesting that expectancy violations regarding one’s sense of meaning in life can lead to reactionary searches for meaning (Schlegel, Manning, & Bettencourt, 2013).

Individuals who have meaning in life but report searching for more may be transitioning into the “achievement stage” of meaning development (Steger et al., 2006). They may have identified certain sources of meaning in life but are still considering additional ones. For example, a socialite with meaningful friendships may “move on” to begin the process of identifying a meaningful career path. Other individuals may be beginning to question existing sources of meaning in life and starting to pursue other, more intrinsic sources in their place (i.e., “foreclosure stage” of meaning development). As another example, the dutiful son who originally pursued medicine as a way to follow in his parents’ footsteps may begin to lean toward a career in the humanities, because this feels more intrinsically satisfying. In both cases, low levels of optimism appear to make it difficult to anticipate a successful transition.

Alternatively, low levels of life satisfaction or positive affect may lead to increases in the search for meaning. Indeed, there is some evidence to suggest that people who find their lives to be satisfying are less likely to search for meaning (Steger & Kashdan, 2007). In this same way, high levels of depressive symptoms could lead to increases in the search for meaning, particularly if the loss of meaning contributed to the development of depressive symptoms in the first place (Frankl, 1963). Thus, it seems likely that the associations between the search for meaning and psychological well-being are bidirectional. Additional research is required to examine the directionality of these associations.

General Discussion

The search for meaning is an important component of human functioning. It is related to positive and negative aspects of psychological well-being and influences both cognitive (e.g., satisfaction with life) and affective (e.g., negative affect) components. The extent to which it impacts psychological well-being appears to be partly conditional on specific factors. Moreover, the effects of a particular search for meaning may depend on the individual searching and what it is they are expecting to achieve from that search. At the same time, the impact of the search for meaning on psychological well-being may be relatively straightforward. For those who search for meaning, this process appears to be largely negative, at least in the short term. Further research will be needed to understand how, and under what conditions, the search for meaning becomes more or less adaptive.

Limitations

There are several limitations worth mentioning. First, this study was cross-sectional. As a result, it is not possible to determine causality. We do not know if the search for meaning leads to worse psychological well-being or if worse psychological well-being prompts a search for meaning as a way to provide relief from distress, or both. Second, because the data were gathered from a sample of mostly white, female college students living in the Midwestern part of the United States, external validity is limited. The results found in this study may be unique to this population and to the demands of collegiate life and emerging adulthood. However, the search for meaning is a process that occurs at various times throughout the lifespan (Erikson, 1982), so examining this process in a sample of college students may have important implications for other stages of life.

Third, sensitivity analyses revealed significant differences in results when analyzing the data with and without participants who had missing data.⁹ Although these differences may be due to a loss of power—sample size was reduced by a fifth, from 240 participants to 200 participants—they reduce confidence in the current findings and suggest the need for replication. At the same time, they may not completely erode the noteworthiness of the results. In both sets of analyses, optimism moderated the relationship between the search for meaning and positive affect. In addition, in both sets of analyses, the presence of meaning moderated the relationship between the search for meaning and some form of negative psychological well-being (i.e.,

⁹ To examine the robustness of my results, I reran all analyses with only complete cases included (i.e., all participants with any missingness were excluded). Notably, the majority of results were affected. The interaction between the search for meaning and the presence of meaning predicting negative affect became non-significant, although it continued to trend toward significance ($b = -.02$, $p = .0569$). In addition, an interaction between the search for meaning and the presence of meaning predicting depressive symptoms emerged ($b = -.02$, $p = .0303$). Moreover, all of the significant interactions between the search for meaning, the presence of meaning, and optimism became non-significant. In contrast, the significant interaction between the search for meaning and optimism predicting positive affect remained significant.

negative affect or depressive symptoms). Additional studies may reveal optimism and the presence of meaning to be consistent, and potentially differential, moderators of the relationships between the search for meaning and psychological well-being.

Fourth, the conclusions drawn from this study may be limited by the choice of moderators. Hope and optimism were conceptualized as moderators of the relationship between the search for meaning—a goal—and different aspects of psychological well-being. It would be equally valid to suggest that the search for meaning moderates the relationships between hope and optimism and particular aspects of psychological well-being. However, because hope and optimism are related to goal pursuits, and because the identification and pursuit of worthwhile goals is considered critical to human functioning and the development of meaning in life (Klinger, 1977), the current model seems appropriate.

Fifth, the current study is limited by the constructivist nature of the Meaning in Life Questionnaire (e.g., “I am looking for something that makes my life feel meaningful.”; Steger et al., 2006). Although individuals report searching for meaning in life, it is not possible to determine what they are searching for. In other words, even though the data suggest that, on average, individuals may believe that meaning in life is something to be discovered or stumbled upon rather than actively pursued (i.e., optimism moderated some relationships, but hope did not), it is not possible to identify *how* individuals go about finding meaning (e.g., through religion, nature, interpersonal relationships, etc). The current study can only determine what factors moderate individuals’ self-reported search for meaning. It cannot determine, for example, whether certain searches are better assisted by the presence of meaning or optimism.

Finally, hope and optimism were included in the current study because they are relevant to goal pursuits and because they are consistent predictors of well-being in both college students

and older adults. However, other constructs that may be relevant to the search for meaning and psychological well-being (e.g., religiosity) were not included.

Future Directions

The search for meaning is associated with psychological well-being, but the nature of this relationship remains unclear. The current study highlights the need for additional examination, including assessment of other potential moderators (e.g., self-awareness), in different samples (e.g., older adults) and under different conditions (e.g., experimental designs). Future research should pay attention to how individuals conceptualize the search for meaning in life, and what exactly individuals report doing when they “search for meaning”. As the current results suggest, individuals may not be pursuing it as a goal in the traditional sense. It may also be useful to analyze how individuals with seemingly distinct worldviews (e.g., atheists vs. theists) conceive of the search for meaning and how they go about pursuing it. Mixed methods studies that include a qualitative portion would be informative in this regard. In addition, longitudinal analyses will be necessary to clarify the direction of these important relationships, and future studies should look at how the strength and nature of the search for meaning might change over time and during particular transition periods (e.g., before and after retirement). In general, understanding the expectations and resulting behaviors that underlie individuals’ search for meaning would do much to inform interventions designed to increase meaning in life.

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TABLES

Table 1

Sample characteristics and descriptive statistics

Variable	Median	SD
Age	21.20	4.28
Sex	<i>N</i>	(%)
Female	171	(71.8)
Male	67	(28.2)
Ethnicity		
Caucasian	187	(79.2)
African American	27	(11.4)
Asian / Pacific Islander	12	(5.1)
Hispanic / Latino(a)	9	(3.8)
Other	1	(0.5)

Table 2

Means, standard deviations, and skew and kurtosis for study variables

Variable	Mean	SD	Skew	Kurtosis
Presence of meaning	23.78	6.88	-.56	.19
Search for meaning	23.92	6.49	-.68	.27
Hope	47.85	8.60	-.53	.42
Optimism	14.59	4.78	-.53	.16
Depressive symptoms	11.78	8.31	1.3	2.7
Life satisfaction	22.48	6.56	-.39	-.29
Positive affect	31.05	8.95	-.17	-.74
Negative affect	19.98	7.73	.84	-.07

Table 3

Zero order correlations between study variables

Variable	1	2	3	4	5	6	7	8
1. Presence of meaning	–							
		-.23*	.55*	.49*	-.47*	.65*	.39*	-.34*
2. Search for meaning		–						
			-.12	-.05	.24*	-.19*	-.07	.23*
3. Hope			–					
				.55*	-.43*	.58*	.41*	-.25*
4. Optimism				–				
					-.57*	.63*	.47*	-.45*
5. Depressive symptoms					–			
						-.67*	-.43*	.59*
6. Life satisfaction						–		
							.48*	-.47*
7. Positive affect							–	
								-.07
8. Negative affect								–

Note. * $p < .01$

Table 4

Overview of moderation analyses

	Independent variable(s)	Moderator(s)	Dependent variable(s)
Simple moderation	Search for meaning	Presence of meaning	Depressive symptoms, satisfaction with life, positive affect, negative affect
Multiple moderation	Search for meaning	Hope; Optimism	Depressive symptoms, satisfaction with life, positive affect, negative affect
Moderated moderation (1)	Search for meaning	Presence of meaning; Hope	Depressive symptoms, satisfaction with life, positive affect, negative affect
Moderated moderation (2)	Search for meaning	Presence of meaning; Optimism	Depressive symptoms, satisfaction with life, positive affect, negative affect

Table 5

Summary of significant moderating effects

Independent variable(s)	Moderator(s)	Dependent variable(s)	<i>B</i>	<i>p</i>
Search for meaning	Presence of meaning	Negative affect	-.02	.043
Search for meaning	Optimism*	Positive affect	.04	.026
Search for meaning	Presence of meaning; Optimism	Depressive symptoms	<-.01	<.001
Search for meaning	Presence of meaning; Optimism	Life satisfaction	<.01	.007
Search for meaning	Presence of meaning; Optimism	Positive affect	<.01	.045

Note. * While holding hope constant at average levels.

Table 6

Depressive symptoms predicted from the search for meaning and the presence of meaning

Variable	<i>B</i>	<i>SE</i>	<i>p</i>	95% CI
Search for meaning	.22	.084	.001	0.05, 0.38
Presence of meaning	-.52	.074	<.001	-0.70, -0.40
Search X Presence	-.01	.010	.253	-0.03, -0.01

Note. *B*, unstandardized coefficient; *SE*, standard error; *p*, probability. 95% CI, 95% confidence interval.

Table 7

Life satisfaction predicted from the search for meaning and the presence of meaning

Variable	<i>B</i>	<i>SE</i>	<i>p</i>	95% CI
Search for meaning	-.04	.058	.445	-0.16, 0.07
Presence of meaning	.61	.049	<.001	0.51, 0.70
Search X Presence	.00	.007	.832	-0.01, 0.02

Note. *B*, unstandardized coefficient; *SE*, standard error; *p*, probability. 95% CI, 95% confidence interval.

Table 8

Positive affect predicted from the search for meaning and the presence of meaning

Predictor	<i>B</i>	<i>SE</i>	<i>p</i>	95% CI
Search for meaning	.06	.095	.563	-0.13, 0.24
Presence of meaning	.51	.081	<.001	0.36, 0.70
Search X Presence	-.01	.012	.584	-0.03, 0.02

Note. *B*, unstandardized coefficient; *SE*, standard error; *p*, probability. 95% CI, 95% confidence interval.

Table 9

Negative affect predicted from the search for meaning and the presence of meaning

Predictor	<i>B</i>	<i>SE</i>	<i>p</i>	95% CI
Search for meaning	.27	.082	.001	0.10, 0.43
Presence of meaning	-.32	.070	<.001	-0.46, -0.18
Search X Presence	-.02	.010	.043	-0.04, -0.01

Note. *B*, unstandardized coefficient; *SE*, standard error; *p*, probability. 95% CI, 95% confidence interval.

Table 10

The conditional effect of the searching for meaning on negative affect at low, average, and high levels of the presence of meaning

Presence of meaning	<i>B</i>	<i>SE</i>	<i>p</i>	95% CI
One <i>SD</i> below mean	.41	.129	.002	0.15, 0.66
At the mean	.27	.082	.001	0.10, 0.43
One <i>SD</i> above mean	.13	.080	.112	-0.03, 0.30

Note. *B*, unstandardized coefficient; *SE*, standard error; *p*, probability. 95% CI, 95% confidence interval.

Table 11

Depressive symptoms predicted from the search for meaning, hope, and optimism

Variable	<i>B</i>	<i>SE</i>	<i>p</i>	95% CI
Search for meaning	.28	.071	<.001	0.14, 0.42
Hope	-.13	.060	.028	-0.30, -0.01
Optimism	-.85	.108	<.001	-1.06, -0.64
Search X Hope	-.01	.009	.242	-0.03, 0.01
Search X Optimism	.01	.015	.593	-0.02, 0.04

Note. *B*, unstandardized coefficient; *SE*, standard error; *p*, probability. 95% CI, 95% confidence interval.

Table 12

Life satisfaction predicted from the search for meaning, hope, and optimism

Variable	<i>B</i>	<i>SE</i>	<i>p</i>	95% CI
Search for meaning	-.14	.051	.009	-0.24, -0.03
Hope	.25	.043	<.001	0.17, 0.34
Optimism	.59	.077	<.001	0.44, 0.77
Search X Hope	<-.01	.007	.930	-0.01, 0.01
Search X Optimism	.01	.011	.337	-0.01, 0.03

Note. *B*, unstandardized coefficient; *SE*, standard error; *p*, probability. 95% CI, 95% confidence interval.

Table 13

Negative affect predicted from the search for meaning, hope, and optimism

Variable	<i>B</i>	<i>SE</i>	<i>p</i>	95% CI
Search for meaning	.26	.073	.001	0.11, 0.40
Hope	.02	.062	.730	-0.10, 0.14
Optimism	-.73	.111	<.001	-0.95, -0.51
SearchXhope	<.01	.009	.815	-0.02, 0.02
Search X Optimism	-.01	.016	.395	-0.04, 0.02

Note. *B*, unstandardized coefficient; *SE*, standard error; *p*, probability. 95% CI, 95% confidence interval.

Table 14

Positive affect predicted from the search for meaning, hope, and optimism

Variable	<i>B</i>	<i>SE</i>	<i>p</i>	95% CI
Search for meaning	-.01	.084	.889	-0.18, 0.15
Hope	.22	.071	.002	0.08, 0.36
Optimism	.64	.127	<.001	0.39, 0.89
SearchXhope	-.02	.011	.095	-0.04, 0.01
Search X Optimism	.04	.018	.028	0.01, 0.07

Note. *B*, unstandardized coefficient; *SE*, standard error; *p*, probability. 95% CI, 95% confidence interval.

Table 15

Depressive symptoms predicted from the search for meaning, the presence of meaning, and hope

Variable	<i>B</i>	<i>SE</i>	<i>p</i>	95% CI
Search for meaning	.24	.091	.010	0.06, 0.41
Presence of meaning	-.29	.086	.001	-0.46, -0.12
Hope	-.25	.064	<.001	-0.38, -0.12
Search X Presence	-.01	.011	.452	-0.03, 0.01
Search X Hope	-.02	.011	.098	-0.04, 0.01
Presence X Hope	.01	.008	.074	-0.01, 0.03
Search X Presence X Hope	.001	.001	.265	-0.01, 0.01

Note. *B*, unstandardized coefficient; *SE*, standard error; *p*, probability. 95% CI, 95% confidence interval.

Table 16

Life satisfaction predicted from the search for meaning, the presence of meaning, and hope

Variable	<i>B</i>	<i>SE</i>	<i>p</i>	95% CI
Search for meaning	-.06	.061	.338	-0.18, 0.06
Presence of meaning	.42	.058	<.001	0.30, 0.53
Hope	.26	.043	<.001	0.18, 0.34
Search X Presence	<.01	.008	.686	-0.01, 0.02
Search X Hope	.01	.007	.155	-0.01, 0.02
Presence X Hope	<-.01	.005	.818	-0.01, 0.01
Search X Presence X Hope	<-.01	.001	.370	-0.01, 0.01

Note. *B*, unstandardized coefficient; *SE*, standard error; *p*, probability. 95% CI, 95% confidence interval.

Table 17

Negative affect predicted from the search for meaning, the presence of meaning, and hope

Variable	<i>B</i>	<i>SE</i>	<i>p</i>	95% CI
Search for meaning	.31	.093	.001	0.12, 0.49
Presence of meaning	-.22	.088	.014	-0.39, -0.04
Hope	-.11	.065	.086	-0.24, 0.02
Search X Presence	-.02	.012	.055	-0.05, 0.01
Search X Hope	<.01	.011	.768	-0.02, 0.02
Presence X Hope	.01	.008	.303	-0.01, 0.02
Search X Presence X Hope	<-.01	.001	.599	-0.01, 0.01

Note. *B*, unstandardized coefficient; *SE*, standard error; *p*, probability. 95% CI, 95% confidence interval.

Table 18

Positive affect predicted from the search for meaning, the presence of meaning, and hope

Variable	<i>B</i>	<i>SE</i>	<i>p</i>	95% CI
Search for meaning	.03	.104	.786	-0.20, 0.23
Presence of meaning	.28	.010	.006	0.08, 0.47
Hope	.31	.074	<.001	0.16, 0.45
Search X Presence	<.01	.013	.979	-0.03, 0.03
Search X Hope	<.01	.012	.975	-0.02, 0.02
Presence X Hope	<-.01	.009	.489	-0.02, 0.01
Search X Presence X Hope	<-.01	.002	.822	-0.01, 0.01

Note. *B*, unstandardized coefficient; *SE*, standard error; *p*, probability. 95% CI, 95% confidence interval.

Table 19

Negative affect predicted from the search for meaning, the presence of meaning, and optimism

Variable	<i>B</i>	<i>SE</i>	<i>p</i>	95% CI
Search for meaning	.28	.088	.002	0.10, 0.45
Presence of meaning	-.09	.078	.267	-0.24, 0.07
Optimism	-.61	.110	<.001	-0.83, -0.40
Search X Presence	-.02	.011	.088	-0.04, 0.01
Search X Optimism	.01	.018	.661	-0.03, 0.04
Presence X Optimism	.01	.014	.418	-0.02, 0.04
Search X Presence X Optimism	<.01	.002	.746	-0.01, 0.01

Note. *B*, unstandardized coefficient; *SE*, standard error; *p*, probability. 95% CI, 95% confidence interval.

Table 20

Depressive symptoms predicted from the search for meaning, the presence of meaning, and optimism

Variable	<i>B</i>	<i>SE</i>	<i>p</i>	95% CI
Search for meaning	.42	.083	<.001	0.25, 0.58
Presence of meaning	-.19	.073	.008	-0.34, -0.05
Optimism	-.94	.103	<.001	-1.14, -0.73
Search X Presence	-.03	.011	.017	-0.05, -0.01
Search X Optimism	.03	.017	.045	0.01, 0.07
Presence X Optimism	.01	.013	.260	-0.01, 0.04
Search X Presence X Optimism	<-.01	.002	<.001	-0.01, -0.03

Note. *B*, unstandardized coefficient; *SE*, standard error; *p*, probability. 95% CI, 95% confidence interval.

Table 21

Life satisfaction predicted from the search for meaning, the presence of meaning, and optimism

Variable	<i>B</i>	<i>SE</i>	<i>p</i>	95% CI
Search for meaning	-.14	.058	.015	-0.26, -0.03
Presence of meaning	.39	.051	<.001	0.29, 0.49
Optimism	.62	.072	<.001	0.48, 0.76
Search X Presence	<.01	.007	.793	-0.01, 0.02
Search X Optimism	<.01	.012	.887	-0.02, 0.02
Presence X Optimism	<-.01	.009	.864	-0.02, 0.02
Search X Presence X Optimism	.01	.001	.008	0.01, 0.02

Note. *B*, unstandardized coefficient; *SE*, standard error; *p*, probability. 95% CI, 95% confidence interval.

Table 22

Positive affect predicted from the search for meaning, the presence of meaning, and optimism

Variable	<i>B</i>	<i>SE</i>	<i>p</i>	95% CI
Search for meaning	-.07	.102	.519	-0.27, 0.13
Presence of meaning	.26	.090	.004	0.09, 0.44
Optimism	.74	.126	<.001	0.49, 1.00
Search X Presence	-.02	.013	.232	-0.04, 0.01
Search X Optimism	.03	.020	.103	-0.01, 0.07
Presence X Optimism	<.01	.016	.803	-0.03, 0.03
Search X Presence X Optimism	.01	.002	.046	0.01, 0.02

Note. *B*, unstandardized coefficient; *SE*, standard error; *p*, probability. 95% CI, 95% confidence interval.

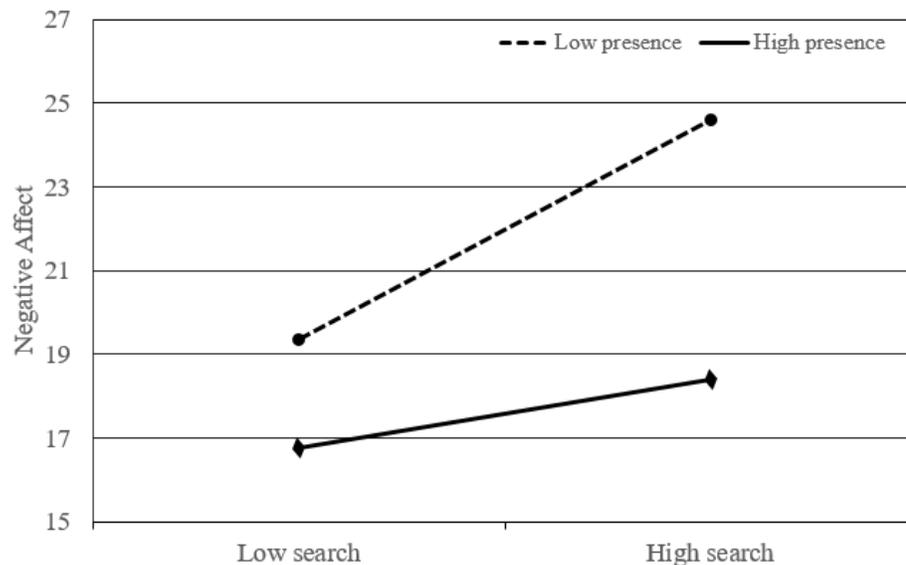
FIGURES

Figure 1. Relationship between the search for meaning and negative affect at low and high levels of presence of meaning.

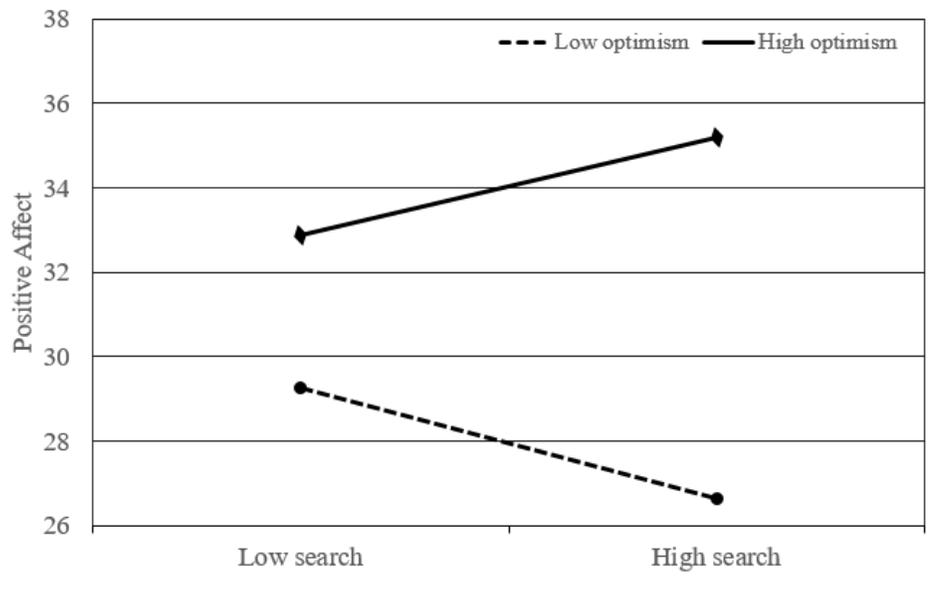


Figure 2. Relationship between the search for meaning and positive affect at low and high levels of optimism while holding hope constant at average levels.

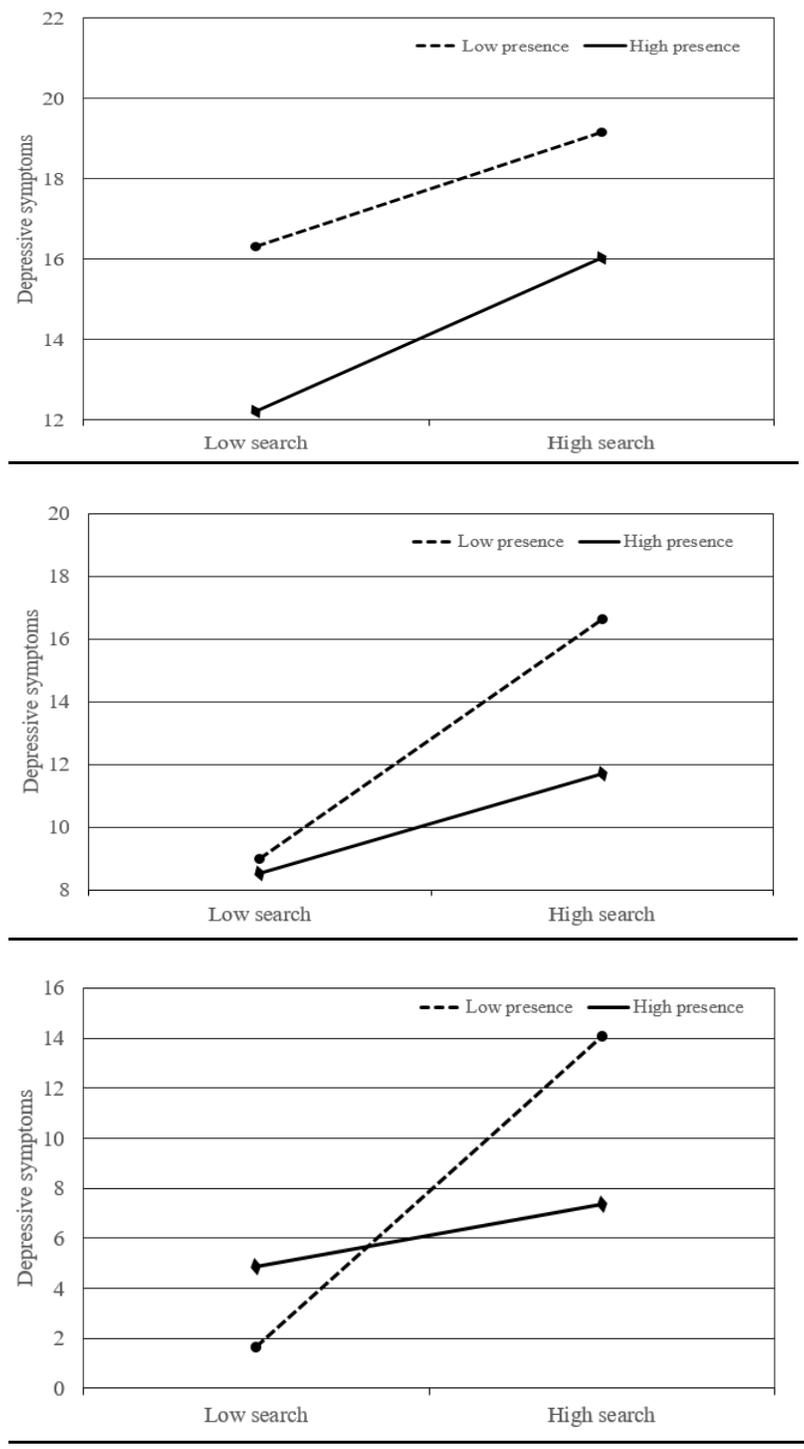


Figure 3. Relationship between the search for meaning and depressive symptoms as a function of the presence of meaning and low, average, and high levels of optimism, respectively (i.e., 1 SD below the mean of optimism, at the mean of optimism, and 1 SD above the mean of optimism).

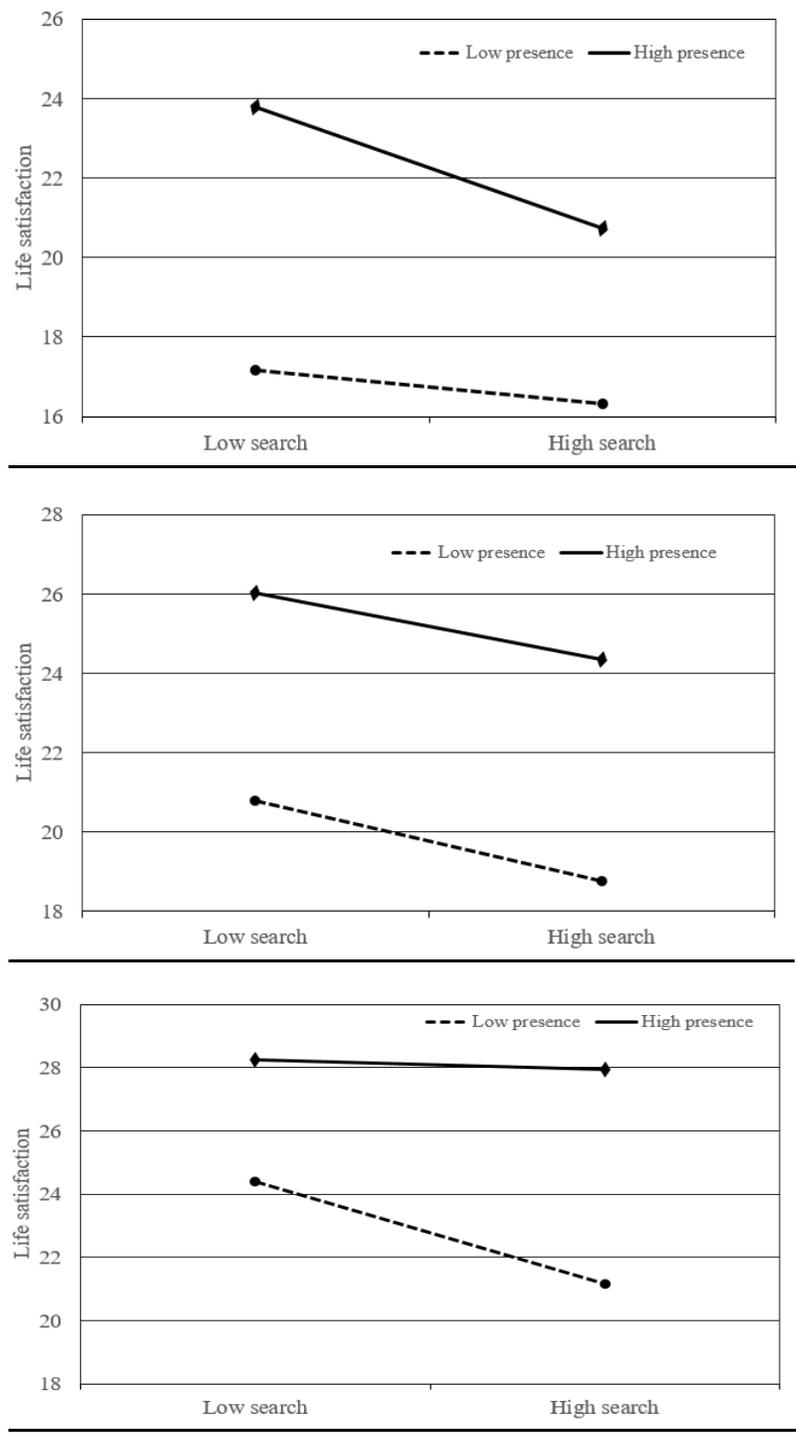


Figure 4. Relationship between the search for meaning and life satisfaction as a function of the presence of meaning and low, average, and high levels of optimism, respectively (i.e., 1 SD below the mean of optimism, at the mean of optimism, and 1 SD above the mean of optimism).

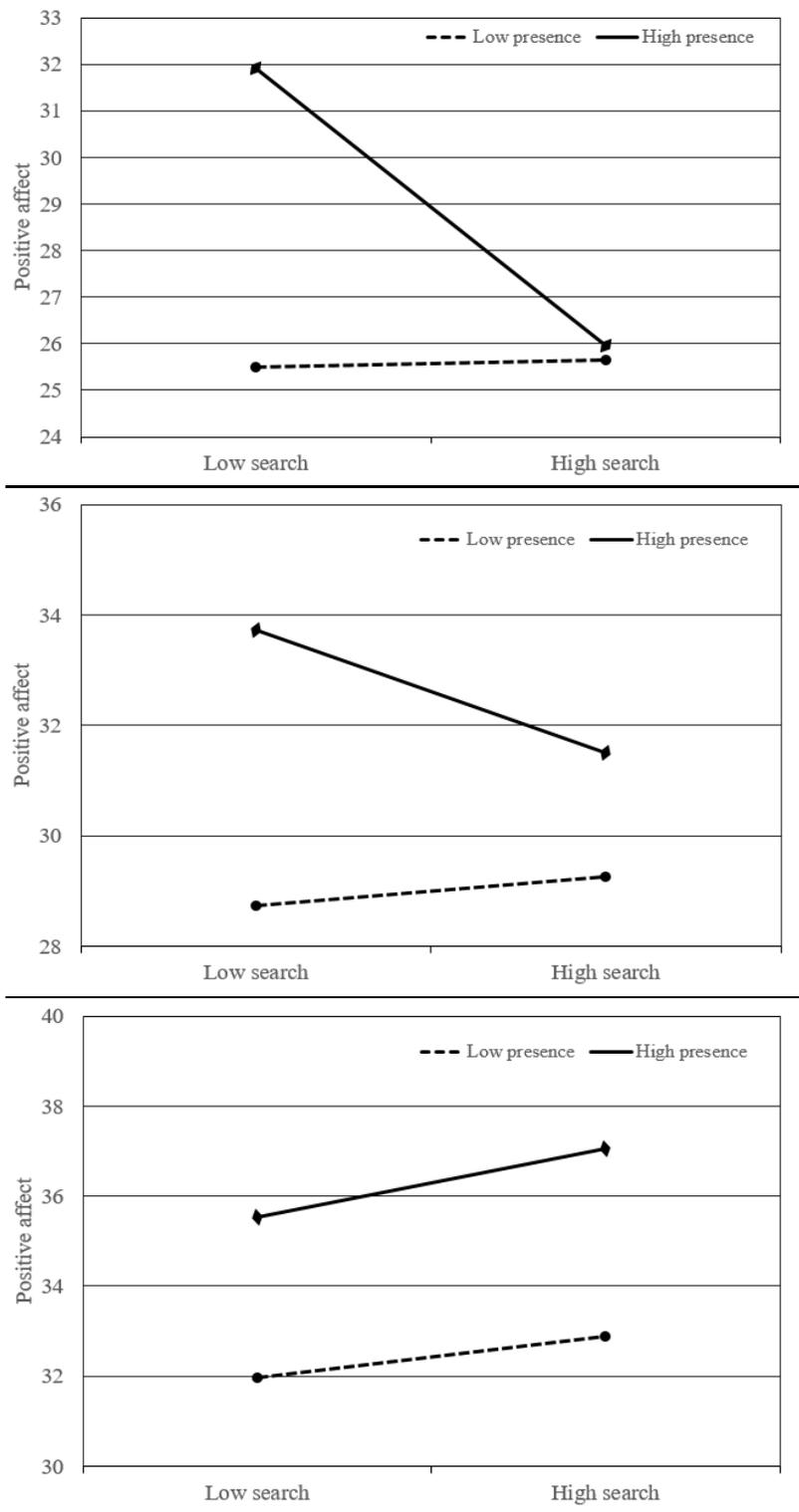


Figure 5. Relationship between the search for meaning and positive affect as a function of the presence of meaning and low, average, and high levels of optimism, respectively (i.e., 1 SD below the mean of optimism, at the mean of optimism, and 1 SD above the mean of optimism).