



Contents lists available at ScienceDirect

## Organizational Behavior and Human Decision Processes

journal homepage: [www.elsevier.com/locate/obhdp](http://www.elsevier.com/locate/obhdp)

## Are affect and perceived stress detrimental or beneficial to job seekers? The role of learning goal orientation in job search self-regulation

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## ARTICLE INFO

## Article history:

Received 24 August 2012

Accepted 11 September 2014

Available online 5 October 2014

Accepted by Paul Levy

## Keywords:

Affect

Perceived stress

Job search intensity

Learning goal orientation

Self-regulation

## ABSTRACT

Although job seekers have variability in affect and perceived stress during their job search, little is known about whether and how such within-person variability is related to job search intensity. We integrated learning goal orientation (LGO) with control theory to theorize that affect and perceived stress provide signals about job search progress that are interpreted differently depending on job seekers' LGO. Specifically, higher LGO would lead to more adaptive responses to increased affect and perceived stress. Results from job seekers with 4 waves of panel data supported our hypotheses. For job seekers higher in LGO, perceived stress was more strongly positively related to subsequent job search intensity than for job seekers lower in LGO. Additionally, job seekers higher in LGO maintained their job search intensity following increased positive affect, whereas those lower in LGO decreased it. Such results suggest control theory can be extended by including between-subjects differences in LGO.

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As job seekers attempt to find a job, they experience variability in their emotions, stress, and job search intensity. As such, the job search is a self-regulated learning process during which individuals need to manage their emotions and stress to maintain or even increase their job search intensity in order to find a job (Creed, King, Good, & McKenzie, 2009; Kanfer, Wanberg, & Kantrowitz, 2001; Turban, Stevens, & Lee, 2009). Because job search intensity is an important predictor of job search success, understanding influences on job search intensity is a critical research area (Kanfer et al., 2001). To date, however, there is still little understanding of whether or how changes in affect and stress are related to job search intensity. We attempt to provide insight into the relationships of affect and stress with job search intensity by examining whether and how between-subjects differences in learning goal orientation (LGO) moderate how affect and perceived stress are related to job search intensity. We theorize that job seekers higher in LGO, who have a focus on learning the skills associated with a job search, have a more adaptive response to changes in affect and stress than do job seekers lower in LGO (Cron, Slocum, VandeWalle, & Fu, 2005; Dweck, 1986; Dweck and Leggett, 1998).

Because the job search is an unstructured, goal-oriented process, scholars have utilized self-regulation theories to understand

it (Kanfer et al., 2001; Wanberg, Zhu, & Van Hooft, 2010). Although there are differences across theories, in general, they propose that how individuals regulate their emotions and effort during a goal-directed activity, such as a job search, influences their success (Bandura, 1986, 1991; Carver & Scheier, 1981, 1990; Kanfer et al., 2001). Because affect and stress vary within individuals across time, to understand how such variability is related to outcomes, researchers need to collect data from respondents at multiple points in time (Beal, Weiss, Barros, & McDermid, 2005; Lord, Diefendorff, Schmidt, & Hall, 2010; Sun, Song, & Kim, 2013). We examine whether intra-individual variability in affect and perceived stress is related to job search intensity. However, individual differences can influence how job seekers react to changes in affect and perceived stress during the job search (Carver & Scheier, 2012; Wanberg et al., 2010). For example, given the same variability in affect and perceived stress, some individuals increase whereas others maintain or decrease their intensity, although little is known about whether or how such between-subjects differences moderate these intra-individual relationships (Carver & Scheier, 2012). We extend prior research by theorizing that individual differences in learning goal orientation, which influences how individuals experience and react to situations (Dweck, 1986; Dweck & Leggett, 1988; Payne, Youngcourt, & Beaubien, 2007), moderate the relationships of affect and perceived stress with job search intensity.

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Our study makes the following contributions to the literature. Although scholars have proposed that changes in affect and perceived stress should be related to job search intensity, results to date have been inconclusive (Song, Uy, Zhang, & Shi, 2009; Wanberg et al., 2010). Our study addresses calls to investigate why some people increase their effort whereas others decrease their effort, given the same level of changes in affect or perceived stress (Carver & Scheier, 2012). Specifically, we theorize that between-subjects differences in learning goal orientation moderate the within-subject relationships of affect and stress with job search intensity. To the best of our knowledge, our study is the first to examine how LGO influences within-subject self-regulation processes, and thus we provide insight into why learning goal orientation is beneficial during the job search (Noordzij, Van Hooft, Mierlo, Van Dam, & Born, 2013). In terms of practical implications, given our focus on job search intensity, we expect our results will provide recommendations for job seekers and career counselors. More broadly, we expect our results will inform self-regulated, goal-directed behaviors in other settings in which individuals need to learn how to accomplish tasks in an autonomous and unstructured manner.

#### *Job search as a self-regulated learning process*

There are at least three types of job seekers: new labor market entrants, job losers, and employed job seekers (Boswell, Zimmerman, & Swider, 2012). Although the job search is a learning process for all job seekers, learning may be particularly important for new labor market entrants, the focus of our study, who are looking for their first full-time job and thus need to learn how to navigate an unstructured process such as job seeking (Barber, Daly, Giannantonio, & Phillips, 1994; Noordzij et al., 2013; Turban et al., 2009; Van Hooft & Noordzij, 2009). In particular, new labor market entrants need to learn how to maintain (or increase) job search intensity as they navigate the emotional ups and downs of the job search (Wanberg et al., 2010).

We examine influences on job search intensity (sometimes called job search behavior as the measure captures the intensity of job search behaviors), which is perhaps the most important predictor of job search success and thus an outcome of interest to job search scholars (Crossley & Stanton, 2005; Côté, Saks, & Zikic, 2006; Kanfer et al., 2001; Wanberg, Zhu, Kanfer, & Zhang, 2012). Studies that tracked job seekers over time found that job search intensity varies within-individuals during the job search process (Song et al., 2009; Sun et al., 2013; Wanberg, Glomb, Song, & Sorensen, 2005; Wanberg et al., 2012). Conceptually, at any one point in time, job search intensity is influenced by both stable and transient factors (Beal et al., 2005). Over time, however, changes in job search intensity will be influenced only by changes in transient factors, such as affect and perceived stress, which are the focus of our study. Thus, to understand the relationship of changes in affect and stress with job search intensity, the researcher must understand the time period during which these relationships occur (Beal et al., 2005). More broadly, choosing an appropriate time frame between measures is important for all longitudinal research that tracks individuals over time.

To understand how changes in affective experiences can influence performance, Beal et al. (2005) described *performance episodes*, which are behavioral segments organized around a relevant goal or objective. As noted by Beal et al. (2005), understanding performance episodes can help researchers determine the appropriate time frame for longitudinal research. Although all performance episodes are time-bound, if the goal is still relevant and active, the performance episode will remain active even when it is not a continuous focus of attention. Additionally, because individuals concurrently have multiple goals, attention

can shift from one goal to another during an extended time period. In our context, finding an acceptable job is the goal and job search intensity is the performance episode. We examined new labor market entrants, who were full-time students, during a three-month period by collecting data every two weeks. Although finding a job is a relevant goal for the participants, consistent with prior research (Sun et al., 2013), we did not expect they would engage in job search activities daily, given their other goals and contextual constraints (such as recruitment schedules).

#### *Affect, perceived stress, and job search intensity*

As noted by scholars, the link between affect and effort is not clear (Foo, Uy, & Baron, 2009). Although self-regulatory theories predict that affect and perceived stress are related to effort, social cognitive theory (Bandura, 1991) and control theory (Carver & Scheier, 1981; Carver & Scheier, 1990) make opposite predictions (Wanberg et al., 2010). In general, social cognitive theory proposes that positive affect is a signal of success which is reinforcing and leads to increased effort, whereas negative affect is demotivating and leads to less effort (Bandura, 1986; Bandura, 1991). In contrast, the affect-as-information model of control theory (Carver & Scheier, 1990; Schwarz & Clore, 1983; Schwarz & Clore, 2003) proposes that affect provides an internal signal about progress toward goal accomplishment that influences subsequent effort. Similarly, the mood-as-input model theorizes that moods provide people with information (e.g., George & Zhou, 2002; Martin, Ward, Achee, & Wyer, 1993). In particular, negative affect and perceived stress are seen as signals that one is not making sufficient progress toward goal accomplishment and thus indicates a need for more intensity. Positive affect indicates that one is making sufficient progress toward the goal and that effort can be either maintained or reduced, depending upon the importance of other goals.

The few studies that collected data from job seekers multiple times during the job search provided mixed support for control theory predictions about whether affect and stress are related to job search intensity. In a daily diary study, Wanberg et al. (2010) indicated that their results were more supportive of control theory predictions than of social cognitive theory predictions, as increased perceived progress was negatively related to subsequent effort. Notably, however, neither positive nor negative affect was related to job search effort the following day. Nonetheless, in another daily diary study, Song et al. (2009) found that when job seekers experienced increased distress they exerted more job search effort the following day, in support of control theory predictions. More broadly, in a study examining entrepreneurs, increased negative affect was positively related to subsequent effort on tasks that required immediate attention (Foo et al., 2009). Thus, although there is some support for control theory predictions, evidence is mixed concerning whether and how within-subject differences in affect and perceived stress are related to job search intensity; Wanberg et al. (2010) found no relationship between affect and subsequent job search effort, whereas Song et al. (2009) found a positive relationship between distress and subsequent effort.

Carver and Scheier (2012) argued that individual differences influence how individuals react to affect or perceived stress, and we believe such between-subjects differences may explain the mixed findings from prior research. Indeed, Wanberg et al. (2010) found that job seekers' self-regulatory approach (action vs. state orientation) moderated the relationship of positive affect with subsequent effort. Specifically, when job seekers experienced lower positive affect, individuals who were higher in the ability to detach from thoughts that might interfere with goal persistence (high ACS disengagement) exerted more effort compared to those lower in disengagement. We extend their study by examining the moderating role of learning goal orientation and by using a

longer time period between measures than in a daily diary. We theorize that learning goal orientation, an individual difference variable that reflects the extent to which an individual focuses on developing competence in a new task (Cianci, Klein, & Seijts, 2010; Pintrich, 2000; VandeWalle, Cron, & Slocum, 2001) will influence how within-subject variability in positive affect, negative affect and perceived stress is related to job search intensity. We expect that individuals with a higher learning goal orientation will have more adaptive responses to variability in stress and affect.

#### *Learning goal orientation*

Goal orientation is a broad term that reflects the reasons why a person does a task or pursues a goal. These reasons lead to a mental framework individuals have in goal accomplishment contexts (Brett & VandeWalle, 1999; DeShon & Gillespie, 2005; Elliot, 2005; Payne et al., 2007). Although there are various models of goal orientations, with slightly different terminology, most models differentiate a learning goal orientation in which an individual is focused on learning how to master a task, from a performance goal orientation in which the focus is on demonstrating competence by performing better than others or some standard (DeShon & Gillespie, 2005). Goal orientation has been conceptualized as a relatively stable personality trait, as a situational specific state, and as a contextual factor that can be experimentally manipulated (DeShon & Gillespie, 2005; Noordzij et al., 2013; Pintrich, 2000; Steele-Johnson, Beauregard, Hoover, & Schmidt, 2000; Van Hooft & Noordzij, 2009). Trait goal orientation is relatively stable over time and across situations, whereas situational goal orientation is domain-focused (Payne et al., 2007). Because of the importance of learning how to conduct a job search, especially for new labor market entrants, we examine job search learning goal orientation, a domain-specific measure of the extent to which the job seeker is oriented toward learning how to master the job search process.

A distinguishing aspect of a learning goal orientation is the desire of the individual to learn how to develop competence to accomplish the task (Dweck, 1986; Dweck & Leggett, 1988). Individuals higher in learning goal orientation are concerned with increasing task competence and developing skills (Dweck & Leggett, 1988), perhaps because they tend to view ability as malleable and believe that effort determines success (Cron et al., 2005; Dweck, 1986; Dweck & Leggett, 1988; Pintrich, 2000). Additionally, high learning goal orientation individuals are more likely to seek challenges, to attempt to develop new skills in new and unstructured situations, and to persist when facing obstacles (Cianci et al., 2010; Pintrich, 2000). Perhaps because of the focus on developing competence, learning goal orientation is associated with seeing more value and less costs in feedback, and thus in seeking more feedback (VandeWalle, 2003; VandeWalle & Cummings, 1997).

Not surprisingly, several studies indicate that in both academic and work contexts individuals with higher learning goal orientation report more effective self-regulation processes (Elliot, McGregor, & Gable, 1999; Payne et al. 2007; VandeWalle et al., 2001). Evidence from experimental and quasi-experimental designs also indicates that unemployed job seekers are more likely to be employed following a learning goal orientation training (Noordzij et al., 2013; Van Hooft & Noordzij, 2009). These studies manipulated learning goal orientation and found that a focus on learning goals led to better self-regulation processes during the job search and better job search success in terms of finding employment (Noordzij et al., 2013; Van Hooft & Noordzij, 2009). Thus, higher learning goal orientation has adaptive characteristics, especially when facing challenges or negative feedback in complex, unstructured environments (Cron et al., 2005; Dweck, 1986; Dweck & Leggett, 1988; Kozlowski et al., 2001).

Although there is substantial evidence from between-subjects studies indicating that learning goal orientation is related to self-regulation, research examining whether and how LGO relates to within-subject self-regulation over time is scarce (Dierdorff & Ellington, 2012). This is an important gap in the literature as self-regulation is a dynamic, within-individual process. The limited evidence to date suggests, however, that LGO is not related to performance trajectories over time (Chen & Mathieu, 2008; Yeo & Neal, 2004), but is related to changes in self-regulation over time (Dierdorff & Ellington, 2012). Dierdorff and Ellington (2012) called for additional research examining whether learning goal orientation influences intra-individual self-regulation. We address that call by examining whether and how between-subjects differences in job search learning goal orientation moderate within-subject job search processes. We do not examine performance goal orientation (either approach or avoid) as there is little theoretical or empirical evidence to suggest that it will moderate the relationships of affect and stress with job search intensity (Noordzij et al., 2013; Van Hooft & Noordzij, 2009).

#### *Negative affect, perceived stress, and learning goal orientation*

The affect-as-information model of control theory (Carver & Scheier, 1990) suggests that affect provides an internal signal about progress toward goal accomplishment that influences subsequent effort. In particular, negative affect is seen as signaling a discrepancy between a goal and progress. We extend this model by theorizing that perceived stress is also interpreted as an internal signal about job search progress, although a more cognitive one than negative affect. Individuals may experience stress when they appraise a situation as providing obstacles to important goals (Folkman & Moskowitz, 2000; Lazarus, 1993). Furthermore, scholars have noted that the job search is stressful (Creed et al., 2009; Crossley & Stanton, 2005; Song et al., 2009; Wanberg, Kanfer, & Rotundo, 1999). Conceptualizing stress as a signal indicating a need to regulate behavior to reduce the perceived stress is consistent with the problem-focused coping response to stress (McKee-Ryan, Song, Wanberg, & Kinicki, 2005; Song et al., 2009; Wanberg, 1997). Problem-focused coping involves changing one's behaviors in order to manage and resolve the cause of stress (Folkman & Moskowitz, 2000; Lazarus, 1993). If job seekers experience stress due to a perceived lack of progress toward finding a job, then a resolution to such stress is to intensify the job search. Notably, scholars have examined job search behaviors as a type of problem-focused coping behavior (McKee-Ryan et al., 2005; Song et al., 2009; Wanberg, 1997). Thus, we examine both perceived stress and negative affect, theorizing that they can be interpreted as signals of a lack of progress in the job search, which can lead job seekers to increase their job search intensity.

As the few studies examining within-subject relationships of negative affect and stress with job search intensity provided mixed evidence (Song et al., 2009; Wanberg et al., 2010), we do not propose a direct relationship but instead examine whether and how LGO influences intra-individual reactions to negative affect and stress. Job seekers higher (vs. lower) in learning goal orientation are more likely to believe they can improve their skills when receiving negative feedback (Cianci et al., 2010; Dweck, 1986; Dweck & Leggett, 1988; Pintrich, 2000). Indeed, one's learning goal orientation influences whether a situation is appraised as a threat or a challenge (Cianci et al., 2010). Additionally, job seekers higher in learning goal orientation are more likely to interpret increased negative affect and perceived stress as signals that additional self-development and effort are needed to accomplish the task (Cianci et al., 2010; Cron et al., 2005; Dweck, 1986; Van Hooft & Noordzij, 2009). Because individuals with higher learning goal orientation see ability as something that can be developed, they

are likely to respond to adverse events with increased effort following perceived failure (Noordzij et al., 2013). Thus, we theorize that when individuals experience increased negative affect and/or perceived stress during the job search, those higher (vs. lower) in learning goal orientation are more likely to increase their job search intensity.

**Hypothesis 1.** *Between-subjects differences in job search learning goal orientation will moderate the within-subject relationship of negative affect and job search intensity, such that negative affect will have a stronger positive relationship with job search intensity for job seekers higher (versus lower) in learning goal orientation.*

**Hypothesis 2.** *Between-subjects differences in job search learning goal orientation will moderate the within-subject relationship of perceived stress and job search intensity, such that perceived stress will have a stronger positive relationship with job search intensity for job seekers higher (versus lower) in learning goal orientation.*

#### *Positive affect and learning goal orientation*

Several studies provide evidence that between-subjects differences in positive affect have a beneficial effect on job search intensity and outcomes (Côté et al., 2006; Turban, Lee, da Motta Veiga, Haggard, & Wu, 2013; Turban et al., 2009). Such findings are consistent with Fredrickson's broaden-and-build theory (2001), which proposes that positive affect broadens thought-action repertoires that lead to developing more resources (Fredrickson & Levenson, 1998; Fredrickson, Tugade, Waugh, & Larkin, 2003). More broadly, an extensive literature review found that between-subjects differences in positive affect influence success across various contexts (Lyubomirsky, King, & Diener, 2005). Note, however, that we examine within-subject differences in positive affect, which is a different construct than between-subjects differences in positive affect. The only one study we found that examined within-subject measures of positive affect in job search found no relationship between positive affect and job search effort (Wanberg et al., 2010). We extend their findings by examining the moderating role of job search learning goal orientation.

Recall that the affect-as-information model of control theory proposes that when individuals are making good progress toward their goal, they experience higher positive affect, which signals that more effort is not needed (Carver & Scheier, 1990; Schwarz & Clore, 1983; Schwarz & Clore, 2003). Thus, individuals who experience increased positive affect are theorized to either maintain or reduce their effort, suggesting either a null or a negative relationship between positive affect and job search intensity (Carver & Scheier, 2011). However, little is known about whether or why effort is maintained or reduced (Carver & Scheier, 2012). We theorize that individuals higher (vs. lower) in job search learning goal orientation, who are more concerned with increasing their task competence, are more likely to maintain rather than reduce their job search intensity when experiencing increased positive affect. Individuals with higher learning goal orientation are more likely to want to learn how to master tasks and thus tend to be more persistent, focused on the task, and enjoy expending effort on the task (Payne et al., 2007; VandeWalle et al., 2001). Thus, we theorize that when job seekers experience increased positive affect, those higher in job search learning goal orientation are more likely to maintain their job search intensity, whereas those lower in learning goal orientation are more likely to reduce their job search intensity.

**Hypothesis 3.** *Between-subjects differences in job search learning goal orientation will moderate the within-subject relationship of*

*positive affect and job search intensity, such that positive affect will have a stronger negative relationship with job search intensity for job seekers lower (versus higher) in learning goal orientation.*

## **Method**

### *Sample and procedure*

The sample consisted of graduating students currently on the job market. We used the College of Business Career Services office at a large Midwestern university to recruit senior undergraduate students who were actively seeking a full-time job. We conducted a longitudinal study using data collected during the fall semester, which is when our job seekers are most active, across two academic years. The participants completed an initial survey and then four bi-weekly (every other week) surveys during a three-month period. The initial survey measured gender, GPA, and learning goal orientation, and the bi-weekly surveys assessed affect, perceived stress, and job search intensity. We used a two-week time frame as we expected that would provide sufficient variability to examine the within-subject relationships of affect and stress with job search intensity. The number of initial respondents was 68 for year 1 and 61 for year 2. We dropped 28 who did not complete at least two bi-weekly surveys. Thus, analyses are based on 101 participants (57% female, average age of 22, and average GPA of 3.37). The response rates to the bi-weekly surveys were good: 89% ( $N = 90$ ) for the first bi-weekly survey, 79% ( $N = 80$ ) for the second, 72% ( $N = 73$ ) for the third and 71% ( $N = 72$ ) for the fourth. We compared respondents who completed only the initial survey with those who also completed at least two bi-weekly surveys and found no differences in gender, GPA, and learning goal orientation. We also compared respondents for year 1 and year 2 on the variables measured on the initial (i.e., gender, GPA, and learning goal orientation) and bi-weekly (affect, perceived stress, and job search intensity) surveys and found no differences.

### *Measures*

#### *Initial survey. Learning goal orientation*

We measured learning goal orientation using a 3-item scale ( $\alpha = .70$ ) from Elliot and McGregor (2001) that we adapted to the job search process. We instructed participants to "rate the extent to which you agree with each of the items" using a 5-point scale. Sample items included: "I want to learn as much as possible from the job search process" and "I desire to completely master the job search process."

#### *Control variables*

We also collected participants' demographic information (i.e., gender and GPA) in the initial survey.

#### *Bi-weekly surveys. Affect*

The bi-weekly questionnaires assessed affect using an 8-item scale from Watson, Clark, and Tellegen (1988) that included the following items: "determined", "attentive", "excited", and "active" for positive affect and "upset", "nervous", "irritable", and "afraid" for negative affect. We instructed participants to "rate the extent to which you have felt this way in the last two weeks" using a 5-point scale ranging from 1 = *very slightly or not at all* to 5 = *very frequently*. The mean coefficient alpha for the positive affect items was .82. The mean coefficient alpha for the negative affect items was .77.

#### *Perceived stress*

We measured perceived stress bi-weekly using 3 items from the Explorational and Decisional Stress scale of the Career Exploration

Survey (Stumpf, Colarelli, & Hartman, 1983). We instructed respondents to “rate how much undesirable stress has the following caused you relative to other significant issues which you have had to contend in the last two weeks” using a scale from 1 = *insignificant compared to other issues with which I have to contend* to 7 = *one of the most stressful issues with which I have to contend*. The items were “interviewing with specific companies”, “looking for a job,” and “deciding what work I want to do.” The mean coefficient alpha was .75.

#### Job search intensity

We measured job search intensity bi-weekly using 4 items from Saks and Ashforth (2002). Participants were asked to “indicate the extent to which you have used this tactic to find out about job openings in the last two weeks” using a scale ranging from 1 = *very slightly or not at all* to 5 = *very frequently*. A sample item was “Used the internet to locate job openings.” The mean coefficient alpha for job search intensity was .76.

#### Analysis

Consistent with prior research, we first investigated whether within-subject variance existed in the repeated-measures variables by running intercept-only (null) models. Results indicated that for job search intensity, 61 percent of the total variance was within-subject (39 percent between); for positive affect, 47 percent was within-subject (53 percent between); for negative affect, 43 percent was within-subject (57 percent between); and for perceived stress, 49 percent was within-subject (51 percent between). These results indicated sufficient within-subject variance in the repeated-measures variables to support the use of hierarchical linear modeling to analyze this data (Raudenbush & Byrk, 2002).

We tested the hypotheses using hierarchical linear modeling (HLM 6.0; Raudenbush, Bryk, & Congdon, 2004), which allowed us to examine variables at multiple levels of analysis. In the present study, the level 1 variables (affect, perceived stress, and job search intensity) were within-subject, and the level 2 variables (gender, GPA, and learning goal orientation) were between-subjects. In all HLM models, we centered the level 1 variables around the individual means using person-mean centering (Raudenbush & Byrk, 2002; Singer & Willett, 2003). Because participants have different average levels of affect, perceived stress, and job search intensity, centering the level 1 variables around the individual's mean (across the time periods) allows the level 1 estimates to represent only within-subject effects. More specifically, these centered level 1 estimates correspond to within-subject differences from the mean score on a bi-weekly basis, controlling for between-subjects variance in the individual means. We also centered the level 2 predictors (i.e., control variables and moderating variable) around the sample mean of the respective variable (grand-mean centering). Grand-mean centering level 2 variables improves the interpretation of the intercept values and reduces multicollinearity (Singer & Willett, 2003).

To test our hypotheses, we examined whether the interaction term of a level 1 variable (i.e., affect, perceived stress) and a level 2 variable (i.e., job search learning goal orientation) significantly predicted another level 1 variable (i.e., job search intensity). We tested the hypotheses by examining relationships between variables measured at the same time (non-lagged; job search intensity at time  $t$ ) as well as lagged relationships (job search intensity at time  $t + 1$ ). For all the analyses, we controlled for affect and perceived stress at time  $t - 1$  as well as gender and GPA. For the non-lagged analyses, we also controlled for job search intensity at time  $t - 1$ , and for the lagged analyses job search intensity measured at time  $t$ . Thus, for all the analyses, we controlled for job search intensity, affect and perceived stress measured at the prior

time. After controlling for these variables at time  $t - 1$ , the effective sample size of observations was 198 for analyses conducted at the same time period and 138 for the lagged analyses.<sup>1</sup>

## Results

The means, standard deviations, and correlations are presented in Table 1. Given the hierarchical nature of the data, we present both within- and between-subjects correlations. The between-subjects correlations were computed by aggregating the repeated measures scores of individuals and are presented above the diagonal. The correlations of the within-subject measures, obtained at the same time, are presented below the diagonal. The within-subject correlations in Table 1 indicate that job search intensity is positively related to perceived stress ( $r = .47, p < .01$ ) and negatively related to positive affect ( $r = -.13, p < .05$ ). Such results indicate that when subjects had higher perceived stress and lower positive affect they also had higher job search intensity. Of additional interest is that negative affect is positively correlated with perceived stress ( $r = .30, p < .01$ ), negatively correlated with positive affect ( $r = -.15, p < .01$ ), and uncorrelated with job search intensity. Finally, learning goal orientation was not related with any of the aggregated within-subject measures.

We first ran models (models 1 and 3 in Table 2) with the control variables at level 1 (affect and perceived stress at time  $t - 1$ ; job search intensity either at time  $t$  or at time  $t - 1$ ) and at level 2 (i.e., LGO, GPA, gender), and the independent variables at level 1 (affect and perceived stress at time  $t$ ). We then added the three interaction terms to examine the three hypotheses (models 2 and 4 in Table 2). We report results from the non-lagged analyses, which used job search intensity collected at the same time period ( $t$ ) as the independent variables ( $n = 198$ ), and the lagged analyses, which used job search intensity from the subsequent time period ( $t + 1$ ;  $n = 138$ ). Likelihood ratio tests indicated that model 2 fit the data better than model 1 ( $\chi^2(6, N = 198) = 46.34, p < .05$ ) and that model 4 fit the data better than model 3 ( $\chi^2(6, N = 138) = 29.08, p < .05$ ). Notably, all three interaction terms were significant for the non-lagged analyses (model 2), although the negative affect by learning goal orientation term was not significant for the lagged analyses (model 4).

#### Hypotheses tests<sup>2</sup>

**Hypothesis 1** proposed that negative affect would have a stronger positive relationship with job search intensity for individuals higher (vs. lower) in job search learning goal orientation. Between-subjects learning goal orientation moderated the within-subject relationship of negative affect with job search intensity when both were measured at the same time ( $\beta = .13, p < .05$ ), but not when intensity was measured at the subsequent time period ( $\beta = .08, n.s.$ ). Simple slopes analyses in HLM (Preacher, Curran, & Bauer, 2006) indicated that the relationship

<sup>1</sup> At this point in time there is no consensus as to whether multilevel modeling or structural equation modeling (e.g., latent change score modeling) is a better way to model repeated measures, although in many cases these approaches lead to identical results (Curran, 2003). Because we examined the moderating effects of a between-subjects (i.e., level 2) measure of LGO, and had missing data at the within-subject level of analysis (i.e., level 1), we preferred a multilevel modeling (HLM) approach, which was also used by other job search researchers who had a similar design (Song et al., 2009; Sun et al., 2013; Wanberg et al., 2010). Nonetheless, to examine the robustness of our findings, we conducted additional analyses, which led to similar results and conclusions as reported in the paper. Further information about these additional analyses is available upon request from the first author.

<sup>2</sup> We also ran these analyses controlling for Performance Approach and Performance Avoid Goal Orientation. Results including such variables did not change significantly. We do not report them for clarity purposes.

**Table 1**  
Means, standard deviations (SD), and intercorrelations between study variables.

Variable	Mean	SD	1	2	3	4	5	6	7
<i>Within-Subject Correlations (Level 1)</i>									
1. Negative Affect	2.40	0.86	–	.42*	–.14	.10	.02	.23*	–.01
2. Perceived Stress	4.24	1.57	.30*	–	.00	.56*	.00	.09	–.06
3. Positive Affect	3.66	0.86	–.15*	.02	–	.16	.02	–.06	.23*
4. Job Search Intensity	3.58	1.05	.10	.47*	–.13*	–	–.06	.05	–.11
<i>Between-Subjects Correlations (Level 2)</i>									
5. Learning Goal Orientation	3.95	0.63					–	.07	–.05
6. Gender	1.57	0.50						–	–.07
7. GPA	3.37	0.40							–

\*  $p < .05$  (two-tailed). Note: Correlations above the diagonal represent between-individuals (aggregated) scores ( $n = 101$ ). Correlations below the diagonal represent within-individual scores ( $n = 315$ ). Specifically, we followed Judge, Fluegge Woolf, and Hurst (2009) who computed these correlations using the standardized HLM coefficients for each pair of variables (see Judge et al., 2009, Table 1, p. 71).

**Table 2**  
Results for job search intensity.

Independent variable ( $t$ and $t - 1$ )	Dependent variable								
	Job search intensity ( $t$ )				Job search intensity ( $t + 1$ )				
	Model 1		Model 2		Model 3		Model 4		
	$\beta$	SE	$\beta$	SE	$\beta$	SE	$\beta$	SE	
Intercept	3.72*	.08	3.72*	.08	3.81*	.08	3.81*	.08	
<i>Within-subject Effects (Level 1)</i>									
Negative Affect ( $t - 1$ )	.15	.09	.06	.11	.35*	.15	.31*	.14	
Negative Affect ( $t$ )	.15	.14	.15	.13	.02	.10	.03	.11	
Perceived Stress ( $t - 1$ )	.06	.07	.04	.07	.11	.09	.11	.10	
Perceived Stress ( $t$ )	.18*	.08	.15*	.07	.20*	.06	.20*	.07	
Positive Affect ( $t - 1$ )	.08	.13	.06	.13	.12	.16	.12	.16	
Positive Affect ( $t$ )	–.20*	.10	–.18*	.09	–.24*	.11	–.20*	.08	
Job Search Intensity ( $t - 1$ )	.15*	.07	.18*	.09	–	–	–	–	
Job Search Intensity ( $t$ )	–	–	–	–	.19*	.08	.18*	.07	
H1: LGO $\times$ Negative Affect ( $t$ )	–	–	.13*	.06	–	–	.08	.14	
H2: LGO $\times$ Perceived Stress ( $t$ )	–	–	.19*	.08	–	–	.18*	.07	
H3: LGO $\times$ Positive Affect ( $t$ )	–	–	.17*	.07	–	–	.14*	.06	
<i>Between-Subjects Effects (Level 2)</i>									
Learning Goal Orientation (LGO)	.01	.15	.01	.15	.09	.15	.09	.15	
Gender (1 = female; 2 = male)	.18	.16	.18	.16	.03	.16	.03	.16	
GPA	–.33*	.15	–.33*	.15	–.31*	.15	–.31*	.14	
–2 log-likelihood	541.91		495.57		503.53		474.45		
Pseudo-R-squared	.15		.27		.17		.28		

SE = robust standard errors.

\*  $p < .05$  (two-tailed tests). Note: For time  $t$ : Level 1,  $n = 198$ . Level 2,  $n = 90$ ; For time  $t + 1$ : Level 1,  $n = 138$ . Level 2,  $n = 69$ .

between negative affect and job search intensity at time  $t$  was .16 for individuals high in LGO (i.e., one standard deviation above the grand mean) and .01 for those low in LGO (i.e., one standard deviation below the grand mean). Such results indicate that for individuals high in LGO, increased negative affect (i.e., controlling for prior negative affect) was associated with increased job search intensity, controlling for prior job search intensity; for individuals low in LGO, increased negative affect was not related to job search intensity. This pattern of results supports the hypothesis with the non-lagged data.

**Hypothesis 2** proposed that job seekers higher in learning goal orientation will have a stronger positive relationship of perceived stress with job search intensity compared to individuals lower in LGO. Results provided full support for **Hypothesis 2** as learning goal orientation moderated the relationship of within-subject perceived stress with job search intensity when perceived stress and job search intensity were measured at the same time ( $\beta = .19$ ,  $p < .05$ ), and when intensity was measured at the subsequent time period ( $\beta = .18$ ,  $p < .05$ ). We plotted both interactions, and, since they depict the same pattern, Fig. 1 illustrates the interaction using the lagged data (i.e., job search intensity at time  $t + 1$ ). As depicted, perceived stress was more strongly positively related to subse-

quent job search intensity for job seekers high in job search learning goal orientation. Simple slopes analyses indicated that the relationship between perceived stress and job search intensity at time  $t + 1$  was .22 for individuals high in LGO and .01 for those low in LGO. Thus, individuals who were high in LGO increased their job search intensity with increases in perceived stress, whereas perceived stress was not related to job search intensity for individuals low in LGO.

**Hypothesis 3** proposed that positive affect would have a stronger negative relationship with job search intensity for individuals lower (vs. higher) in job search learning goal orientation. As shown in Table 2 (models 2 and 4), the interaction term between learning goal orientation and positive affect was significant when positive affect and job search intensity were measured at the same time ( $\beta = .17$ ,  $p < .05$ ), and when intensity was measured at the subsequent time period ( $\beta = .14$ ,  $p < .05$ ). As illustrated in Fig. 2, using the lagged data, there was a negative relationship between positive affect and subsequent job search intensity for job seekers low in learning goal orientation, although positive affect was not related to job search intensity for those high in job search learning goal orientation. Simple slopes analyses indicated that the relationship between positive affect and job search intensity at time  $t + 1$  was  $-.04$  for

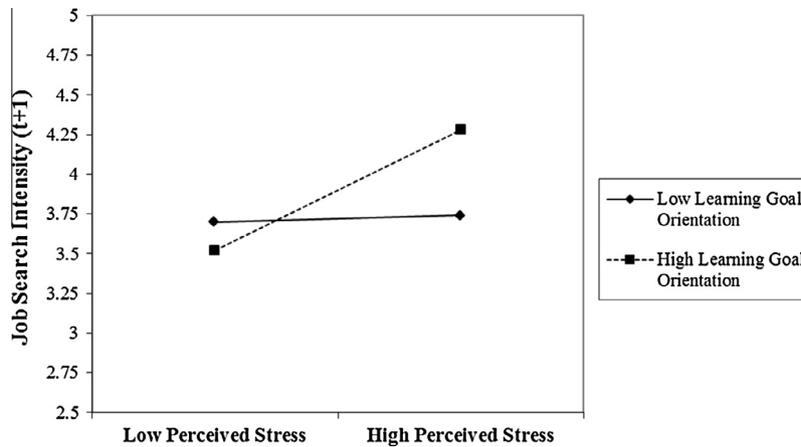


Fig. 1. Relationship Between Perceived Stress and Job Search Intensity Moderated by LGO.

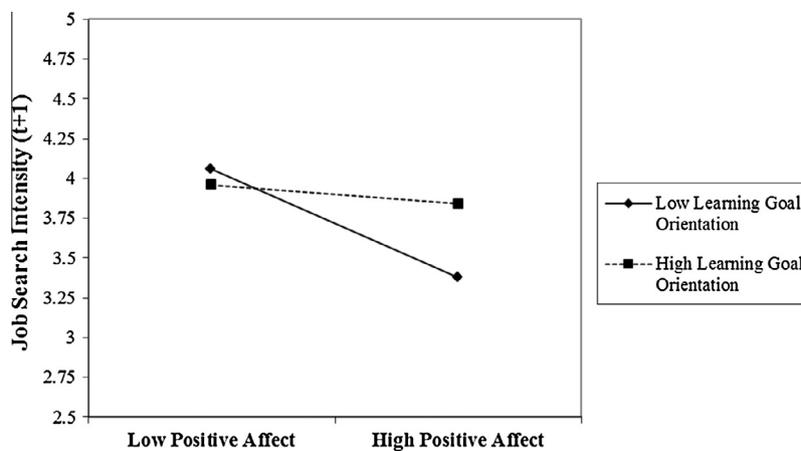


Fig. 2. Relationship Between Positive Affect and Job Search Intensity Moderated by LGO.

individuals high in LGO and  $-.17$  for those low in LGO. Thus, job seekers high in LGO maintained their job search intensity regardless of their positive affect, whereas individuals low in LGO reduced their job search intensity when they experienced increased positive affect. Such results provide insight into the relationship between positive affect and job search intensity, as postulated by the affect-as-information model of control theory.

#### Additional analyses

Although we carefully developed a theoretical rationale for the hypothesized relationships, and the lagged analyses provided support for our causal direction, we cannot rule out alternative causal or reciprocal models. We examined influences on job search intensity because of its importance for job search success (Kanfer et al., 2001). We recognize, however, that increased job search intensity may also influence affect and perceived stress, depending on job seekers' learning goal orientation. Thus, we conducted additional analyses to examine whether increased job search intensity was related to affect and perceived stress (both at time  $t$  and  $t + 1$ ) and the possible moderating effect of between-subjects learning goal orientation. These additional analyses also included the same control variables as in the main analyses (e.g., affect, stress, and job search intensity at time  $t - 1$ ).

Job search intensity was not related to positive or negative affect and there was no job search intensity–learning goal orientation interaction on positive or negative affect. However, job search

intensity was positively related to perceived stress at time  $t$  and time  $t + 1$  and job search LGO moderated the relationship between job search intensity and perceived stress at time  $t + 1$ , but not when both variables were measured at the same time. Examination of the pattern of moderation indicated that increased job search intensity was related to increased perceived stress (slope =  $.24$ ) for individuals low in LGO but there was no such relationship (slope =  $.01$ ) for those high in LGO.

#### Discussion

We integrated the affect-as-information model of control theory (Carver & Scheier, 1990; Schwarz & Clore, 1983; Schwarz & Clore, 2003) with learning goal orientation (Brett & VandeWalle, 1999; DeShon & Gillespie, 2005; Elliot, 2005; Payne et al., 2007) by examining the moderating role of between-subjects differences in job search learning goal orientation on the within-subject relationships of affect and perceived stress with job search intensity. Prior research has found mixed evidence for the relationships of intra-individual variability in affect and stress with job search intensity (Song et al., 2009; Wanberg et al., 2010); our results suggest that taking into account job seekers learning goal orientation can explain such mixed results. Specifically, job seekers higher in LGO increased job search intensity when they experienced increased negative affect and perceived stress, and maintained job search intensity when they experienced increased positive affect. We see our study as providing these important

contributions to the literature. First, we found support for our hypotheses that inter-individual learning goal orientation influences intra-individual self-regulation processes of job seekers. More broadly, our results suggest future researchers should examine other individual differences that influence intra-individual self-regulation processes. Our results also suggest that the affect-as information model can be extended to include cognitive signals such as perceived stress (Carver & Scheier, 1990; Schwarz & Clore, 1983; Schwarz & Clore, 2003). Finally, our results provide insight into the mechanisms through which a learning goal orientation is beneficial for job seekers (Noordzij et al., 2013; Van Hooff & Noordzij, 2009).

To the best of our knowledge, our study is the first to examine the role that between-subjects differences in learning goal orientation have in influencing within-subject self-regulation processes. Specifically, we addressed calls to examine why some individuals increase, while others decrease, their intensity when experiencing changes in affect and perceived stress (Carver & Scheier, 2012). We found support for our hypotheses that job search learning goal orientation influences how individuals regulate themselves across time as they work toward the goal of finding a job. As such, our findings extend control theory, as individuals with higher job search learning goal orientation had more adaptive responses to increased affect and perceived stress.

In general, our results provide support for the affect-as-information model of control theory (Carver & Scheier, 1990; Carver & Scheier, 2012), although only for individuals higher in learning goal orientation. Specifically, when learning goal orientation was high, increased negative affect and perceived stress were associated with increased job search intensity. We further extended the affect-as-information model of control theory, which has focused solely on affect, by finding that perceived stress also provides a signal about progress toward a goal, although LGO influences how that signal is interpreted. More broadly, our results support the argument that individuals use job search behaviors as a problem-focused mechanism to cope with stress (McKee-Ryan et al., 2005; Song et al., 2009). Our results are also consistent with the conservation of resources theory (Hobfoll, 1989; Hobfoll, 2002; Wright & Hobfoll, 2004), which suggests that individuals strive to protect and build resources, in this case by increasing their job search intensity, to mitigate the loss of resources signaled by increased perceived stress. We expect there are other cognitive signals of job search progress and thus encourage research to continue to expand the affect-as-information model to include other such indicators (Schwarz, 2012). For example, variability in job search self-efficacy provides a signal about job search progress, although how that signal is interpreted depends upon the job seekers' regulatory focus (Sun et al., 2013).

Our findings provide additional insight into the relationship between positive affect and effort as postulated by the affect-as-information model (Carver & Scheier, 1990; Carver & Scheier, 2012; Schwarz & Clore, 1983; Schwarz & Clore, 2003). Carver and Scheier (2012) argued that increased positive affect signals that progress is sufficient and thus individuals can either maintain or reduce their effort, although they emphasized that research is needed to determine why people differ in their reactions to changes in positive affect. We found that learning goal orientation influenced the relationship of positive affect with subsequent job search intensity, such that job seekers higher in LGO maintained their intensity with increased positive affect whereas those lower in LGO reduced their intensity. Thus, learning goal orientation was adaptive as job seekers maintained their intensity. Our results extend Wanberg et al. (2010) who found that although positive affect was not related to subsequent effort, the action-state orientation of disengagement influenced how job seekers reacted to positive affect. Specifically, when job seekers experienced lower

positive affect, individuals who were able to detach (disengage) from negative thoughts exerted more subsequent job search effort, compared to those who had lower ability to disengage. Combining our results suggests that individual differences, such as LGO and action-state orientation, influence how changes in positive affect are interpreted, and suggest important extensions to the affect-as-information model. More broadly, evidence is beginning to accumulate indicating that although individuals with higher positive affect typically experience more positive outcomes than individuals lower in positive affect (Lyubomirsky et al., 2005), within-subject increases in positive affect during a job search may not be beneficial for everyone (e.g., lower LGO) and can lead to a reduction in effort.

To model the dynamic and within-subject nature of self-regulation, data must be collected across time (Beal et al., 2005; Lord et al., 2010; Sun et al., 2013). Our examination of intra-individual processes led to a different pattern of relationships than those found with inter-individual differences. For example, although perceived stress and negative affect are viewed as detrimental for goal accomplishment (Cohen, Tyrrell, & Smith, 1993; Kaplan, Bradley, Luchman, & Haynes, 2009; McCarthy & Goffin, 2004), we found that within-subject increases in these variables had a positive influence on job search self-regulation, at least for individuals high in learning goal orientation. Notably, some evidence suggests that within-subject variability captures a different construct, with different patterns of relationships, than between-subjects variability. For example, Sun et al. (2013) found that the between-person relationship of self-efficacy with effort was positive, whereas the within-subject relationship depended on between-subject differences in regulatory focus, such that the relationship was positive for individuals with a high prevention focus but negative for individuals with a high promotion focus. Their results are consistent with our suggestion that future self-regulation research needs to collect data multiple times from participants and examine whether between-subject individual differences influence intra-individual self-regulation process.

To date, evidence indicates that individual differences in action-state orientation (Wanberg et al., 2010), approach and avoidance motivation (Wanberg et al., 2012), and regulatory focus (Sun et al., 2013) influence intra-individual variability in job search self-regulation. We encourage researchers to extend our results and examine how other inter-individual differences influence intra-individual self-regulation processes beyond the job search (Chen & Mathieu, 2008). Although we examined the affect-as-information model of control theory during the job search process, we believe that our results have broader implications for studies examining self-regulation processes. For example, inter-individual differences may influence how individuals react to feedback received during a self-regulation process. Note that although we theorized that job seekers interpreted the variability in affect and perceived stress as signals about progress, we did not measure progress. Thus, future research might explicitly measure and/or manipulate perceived progress, perhaps by collecting explicit feedback. The examination of how between-subjects differences influence within-subject self-regulation processes is an important area of research.

Finally, our results are consistent with and extend evidence from recent field experiments that found that training job seekers to set learning goals resulted in greater re-employment (Noordzij et al., 2013; Van Hooff & Noordzij, 2009). Specifically, learning goal orientation is beneficial by helping job seekers deal productively with changes in their levels of affect and perceived stress during the job search. Our results also are consistent with the finding that job search learning goal orientation was positively related to learning from failure (Noordzij et al., 2013). Perhaps individuals with higher LGO were more likely to learn from failure because they

had more adaptive reactions to changes in affect and perceived stress during the job search. We agree with prior scholars who called for further investigation examining the influence of learning goal orientation in job search (Noordzij et al., 2013; Van Hooft & Noordzij, 2009). In particular, research might extend our study, which examined between-subjects differences in job search learning goal orientation, by examining within-subject differences in learning goal orientation during the job search. Very few studies have examined within-subject differences in LGO over time (for an exception see Yeo, Loft, Xiao, & Kiewitz, 2009). Although evidence indicates that LGO is relatively stable over relatively short periods of time (Payne et al., 2007), research might examine whether LGO changes during the job search process and, if so, whether early successes (or failures) influence subsequent LGO. More broadly, since individuals higher in LGO have a strong focus on learning, perhaps their LGO changes less during the search than individuals lower in LGO. A focus on how LGO changes during the job search could be a promising avenue for future research.

#### *Limitations and future research*

To understand the appropriate time frame between measures in a longitudinal study, researchers need to understand the performance episode examined (Beal et al., 2005), which in this study was job search intensity. For our sample, full-time students who are also active job seekers, we chose a two-week time frame, expecting that it allowed enough time for the job seekers' affect, perceived stress, and job search intensity to vary. However, we urge future research to use different time frames as relevant theory does not provide clear guidance for the best time frame (Ashforth, 2012). For example, job search studies have used time frames that varied from daily to monthly (Song et al., 2009; Sun et al., 2013; Wanberg et al., 2010). We suspect the ideal time frame varies across contexts and depends on the study's goals.

We examined job search processes over a three-month period, during which, in our context, participants tended to be active job searchers. Although response rates remained relatively high (i.e., above 70%), the number of responses decreased as the study progressed, which is common in longitudinal studies. Because we did not measure the reason for not responding to a survey, we cannot determine whether the non-responses resulted from weariness in completing surveys or whether participants were successful in securing and accepting a job offer in the early stages of our data collection. To address this question, future research might collect data about when job seekers receive and accept job offers. Nonetheless, we do not believe the reduction in response rates is an alternative explanation for our pattern of results, given that for the lagged analyses respondents completed surveys for 3 consecutive time periods.

We examined job search intensity as a dependent variable given its importance for job search success (Kanfer et al., 2001). Although we carefully developed a theoretical rationale for the direction of the hypothesized relationships, we cannot completely rule out alternative causal models, and thus reported additional analyses examining different causal directions. We encourage future researchers to collect data from job seekers throughout the job search process, to examine whether the causal direction of affect and stress with job search intensity varies during the search. Additionally, although we theorized that job seekers interpret their affect and stress as signals of their job search progress we did not measure perceived progress. Future studies might study how feedback from employers relates to perceptions of progress and to experienced affect and stress. Relatedly, future work might examine whether individual differences, such as emotional stability influence whether feedback is related to affect and perceived stress. For example, job seekers higher in emotional stability may

experience lower emotional reactions to either positive or negative feedback received during the process.

Finally, consistent with previous research (Crossley & Stanton, 2005; Côté et al., 2006; Wanberg et al., 2010), we examined affect without differentiating the activation level. Note, however, that Russell (2003) suggested that activated and deactivated emotions may have different influences on self-regulation processes such as the job search. For example, anxiety and depression, although both components of negative affect, would be expected to have different effects on job search intensity. Depression is a low activated negative affect and may not lead to increased intensity, whereas we expect that anxiety, which is higher in activation, would lead to increased intensity. Similarly, contentment and enthusiasm are both positive affect, but we expect that contentment is less likely to lead to subsequent job search intensity than enthusiasm. Thus, we urge future research to examine separately the role of emotions high on activation and low on activation in job search.

#### *Practical implications*

Our paper has important practical implications for job seekers and career counselors. Our results, in conjunction with prior evidence (Wanberg et al., 2010; Wanberg et al., 2012), indicate that job search intensity varies during the search. Given the positive relationship of job search intensity with employment success (Kanfer et al., 2001), it is important for job seekers to develop strategies to maintain high levels of job search intensity throughout the process. Our results suggest that higher learning goal orientation is helpful in maintaining, and even increasing, job search intensity during the process. In addition, job seekers need to learn and enact effective strategies to find a job (e.g. Barber et al., 1994), and evidence indicates that learning goal orientation may help job seekers develop such new strategies (Cron et al., 2005; VandeWalle et al., 2001). Given that learning goal orientation is malleable (Dweck, 1986; Dweck & Leggett, 1988), these findings suggest that career counselors should attempt to help job seekers realize that job search skills can be learned and developed during the process (Dweck, 2006). Stated differently, job seekers can be trained to develop a learning goal orientation toward the job search.

Prior evidence indicates that GPA is positively related to job search outcomes (Caldwell & Burger, 1998; Turban et al., 2009), although we found that GPA was negatively related to job search intensity. We expect that participants with higher GPAs had greater confidence that they would find a good job and thus exerted less intensity, a finding that is consistent with control theory predictions. Nonetheless, given the evidence that job search intensity leads to more positive employment outcomes (Kanfer et al., 2001), individuals with higher GPAs may be limiting their employment opportunities. Thus, although individuals with higher (versus lower) GPAs have better credentials and thus should feel more confident, they would still benefit from greater intensity as they search for employment. Although anecdotal, we know high GPA students who were overly confident in their ability to secure employment and thus did not exert enough intensity to secure excellent employment offers.

Our findings, based on within-subject measures during the job search process, suggest that job seekers should learn how to use stress in a positive way, as an activator. Career counselors could organize training programs that emphasize approaching stressful situations as challenges that help job seekers achieve their goals, rather than focusing on the detrimental aspects of stress. Our findings also lead to a more nuanced recommendation regarding the role of positive affect in the job search. Although broaden-and-build theory (Fredrickson, 2001) suggests that greater positive affect helps job seekers build resources that can be used during the job search, our results suggest that increased positive affect

during the job search can lead to reductions in job search intensity for job seekers lower in learning goal orientation. Note that studies testing broaden-and-build theory in the job search (e.g. Turban et al., 2009) used a between-subjects design and found that job seekers with greater positive affect were more successful. Our results, however, examined within-subject differences in positive affect during the job search, and suggest that job seekers might be coached to realize that increased positive affect can lead to reductions in search intensity, if job seekers are not inclined to learn and develop effective job strategies (i.e., are lower in learning goal orientation).

**Conclusion**

Searching for a job is a time-consuming process, during which job seekers need to learn how to regulate their affect, perceived stress, and job search intensity to achieve their goal of getting a job. Our results suggest that *dynamic* relationships among perceived stress, affect, and job search intensity throughout the job search depend upon job seekers' learning goal orientation. As such, our findings suggest the importance of future research examining how between-subjects individual differences influence within-subject self-regulation processes.

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