

Insight into job search self-regulation: Effects of employment self-efficacy and perceived progress on job search intensity

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ABSTRACT

This study builds on a self-regulation framework to examine the influence of employment self-efficacy and perceived progress on job search intensity. Results from a repeated-measures study with new labor market entrants indicated that job seekers with higher between-person chronic employment self-efficacy put more intensity in their job search compared to those with lower chronic employment self-efficacy. Notably, however, within-person analyses indicated that as employment self-efficacy increased, job search intensity subsequently decreased. These results provide support for social cognitive theory for between-person employment self-efficacy, and for control theory for within-person employment self-efficacy. Furthermore, increased perceived progress was positively related to subsequent job search intensity. The positive relationship of perceived progress with subsequent job search intensity was moderated by chronic employment self-efficacy, such that the relationship was positive only for job seekers with lower chronic employment self-efficacy.

1. Introduction

As job seekers search for employment, they need to regulate their job search intensity to find acceptable employment (da Motta Veiga & Turban, 2014; Kanfer, Wanberg, & Kantrowitz, 2001). An important predictor of job search intensity is self-efficacy, typically defined as job seekers' confidence in their ability to successfully complete job search behaviors and obtain employment (Kanfer et al., 2001). Perhaps because self-efficacy plays a central role in self-regulation theories (e.g., Bandura, 2012), it "is one of the most studied variables in the job search literature" (Saks, Zikic, & Koen, 2015, p. 104). Nonetheless, there remains considerable ambiguity about whether and how self-efficacy is related to intensity in job search, with studies finding a positive relation (e.g., Kanfer et al., 2001; Saks et al., 2015; Zimmerman, Boswell, Shipp, Dunford, & Boudreau, 2012), a negative relation (e.g., Liu, Wang, Liao, & Shi, 2014; McFayden & Thomas, 1997), and a null relation (e.g., Sun, Song, & Lim, 2013). However, given the importance of self-efficacy in self-regulation (Bandura, 1991), understanding whether and how self-efficacy is related to job search intensity has important theoretical and practical implications (Liu et al., 2014; Saks et al., 2015).

As noted by scholars (Liu et al., 2014; Saks et al., 2015), one reason for the different results of self-efficacy with job search intensity is that some studies examining job search self-efficacy used scales that include items measuring both job search behavior self-efficacy (confidence in one's ability to execute job search behaviors) and employment or job search outcome self-efficacy (confidence in one's ability to obtain job offers or employment). Recent evidence indicates, however, that different types of self-efficacy have different relationships with job search intensity (Liu et al., 2014; Saks et al., 2015; Wanberg, Zhu, & van Hooft, 2010).

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For example, using a within-person design, Liu et al. (2014) found that job search intensity was positively related to job search behavior self-efficacy and negatively related to employment self-efficacy. Additionally, using a between-person design, Saks et al. (2015) found similar results as job search intensity was positively related to job search behavior self-efficacy and negatively related to job search outcome self-efficacy. Thus, one reason for the variability in results in the relationship of self-efficacy with job search intensity is that researchers have not differentiated job search behavior self-efficacy from employment self-efficacy (da Motta Veiga, Turban, Gabriel, & Chawla, 2018; Liu et al., 2014; Saks et al., 2015).

A second reason for variability in the relationship of self-efficacy with job search intensity is that results may differ depending on whether researchers examine between-person differences in self-efficacy or within-person changes in self-efficacy (Liu et al., 2014; Sitzmann & Yeo, 2013; Vancouver, Thompson, & Williams, 2001; Yeo & Neal, 2006, 2013). Most studies examining the relationship between self-efficacy and job search intensity have used between-person designs and thus examined chronic self-efficacy (e.g., Ali, Ryan, Lyons, Ehrhart, & Wessel, 2016; Zimmerman et al., 2012). In general, such studies indicate that individuals with greater self-efficacy tend to have greater job search intensity, which is consistent with social cognitive theory (Bandura, 1991, 2012). However, since self-regulation is a dynamic within-person process (Lord, Diefendorff, Schmidt, & Hall, 2010), other scholars have used within-person designs to examine the relationship of transient self-efficacy with job search intensity (Liu et al., 2014; Sun et al., 2013). Evidence from within-person designs indicates that self-efficacy is negatively related to intensity, which is consistent with control theory propositions (Carver & Scheier, 1981, 2012). Specifically, increased self-efficacy is seen as a signal regarding goal attainment, such that when job seekers become more confident in their ability to find employment, they reduce their job search intensity.

To better understand the role of self-efficacy in job search, we extend prior research by using the same measure of employment self-efficacy to examine the relationship of job search intensity with both between-person differences in self-efficacy and within-person changes in self-efficacy. We examine employment self-efficacy, which we define as job seekers' confidence in their ability to successfully obtain employment, because employment is the ultimate goal of the job search and because we expect that job search intensity will be related to both between-person differences and within-person changes in job seekers' confidence to find employment. Thus, we use both a within- and between-person design to examine the relationships of transient (i.e., within-person) and chronic (i.e., between-person) employment self-efficacy with job search intensity using a sample of actual job seekers.

As noted above, control theory proposes that individuals who are increasingly confident in their ability to attain a goal will exert less effort than those with lower confidence (Carver & Scheier, 1981, 2012). We theorize that as individuals conduct their job search, they evaluate the extent to which they are making progress toward the goal of obtaining employment, which influences the extent to which they perceive a need to increase or decrease their job search intensity. Although perceived progress is thought to be important in self-regulation processes, it has received little attention in the job search literature (for exceptions see Liu et al., 2014; Wanberg et al., 2010). We extend prior research and examine the within-person relationship of changes in perceived progress with job search intensity. Furthermore, consistent with recommendations to examine whether between-person variables moderate within-person relationships (da Motta Veiga et al., 2018; da Motta Veiga & Gabriel, 2016; Sun et al., 2013), we further investigate whether the within-person relationship of perceived progress with intensity differs depending on job seekers' level of chronic employment self-efficacy.

Overall, we contribute to the literature in the following ways. Our primary contribution is to provide insight into important self-regulation processes during the job search. To do so, we examine possible differences in the relationships of within- and between-person employment self-efficacy with the job search intensity of actual job seekers. As such, we provide insight into the role of self-efficacy, an important self-regulation variable, in the job search. We also examine whether within-person perceived progress, an internal signal capturing whether job seekers are getting closer to goal attainment, is related to job search intensity, and whether and how chronic employment self-efficacy moderates that relationship.

2. Theoretical background and hypotheses

2.1. Self-efficacy and self-regulation

Job search is a self-regulated process in which job seekers need to manage their motivation to accomplish the distal goal of finding a job (da Motta Veiga & Gabriel, 2016; Kanfer et al., 2001; Liu et al., 2014). Job seekers with greater job search intensity tend to have more successful searches, which has led to considerable research examining influences on intensity (Kanfer et al., 2001). However, there is considerable variability between job seekers in their level of job search intensity, as well as considerable within-person variability in motivation and job search intensity during the search (da Motta Veiga & Gabriel, 2016; da Motta Veiga & Turban, 2014; Liu et al., 2014; Sun et al., 2013). Perhaps one of the most important motivational constructs related to job search intensity is whether job seekers believe they have the ability to attain employment, namely employment self-efficacy (da Motta Veiga et al., 2018; Liu et al., 2014; Saks et al., 2015), although evidence from job search studies is mixed, and different self-regulation theories make somewhat different predictions regarding that relationship.

Consistent with self-regulation theories, the job search process is thought to begin when a person perceives a discrepancy between their current situation and a desired situation (i.e., current vs. desired employment status). Following this discrepancy, job seekers set goals, assess progress, and adjust their actions, such as job search intensity, to accomplish the set goals (Bandura, 1991, 2012; Carver & Scheier, 1981, 2012). Job seekers' confidence in their ability to successfully complete job search behaviors and obtain employment is theorized to influence their intensity (Saks et al., 2015; Zimmerman et al., 2012). For example, individuals with no confidence in their ability to find a job (i.e., employment self-efficacy) are not likely to begin the job search process (Saks et al., 2015). Analogously, a person who is confident they can find a job with little effort will, presumably, have lower levels of job search intensity. The prior

two examples compared potential job seekers on their confidence in finding a job. Note, however, that job seekers' confidence in finding a job also varies during the job search (Liu et al., 2014; Sun et al., 2013). Thus, to understand the role of self-efficacy in self-regulated processes, such as job search, researchers need to examine differences in self-efficacy between job seekers as well as differences in self-efficacy within job seekers during the process.

Self-efficacy is a central concept in self-regulation processes, although its proposed relationship with intensity (or effort)¹ varies in social cognitive theory and in control theory, which are two prominent theories in job search research (e.g., da Motta Veiga & Turban, 2014; Wanberg et al., 2010). For example, social cognitive theory proposes that individuals with higher self-efficacy tend to set higher goals and are more likely to persist following failure, compared to individuals with lower self-efficacy (Bandura, 1991, 2012). Thus, self-efficacy is proposed to have a positive relationship with motivation and persistence, and considerable evidence indicates that individuals with higher self-efficacy are better performers than individuals with lower self-efficacy (e.g., meta-analysis by Stajkovic & Luthans, 1998). Similarly, studies examining the role of self-efficacy in job search also found that individuals with greater self-efficacy exert more intensity and experience greater success in their job search (e.g., Ellis & Taylor, 1983; Kanfer et al., 2001; Kanfer & Hulin, 1985).

Whereas social cognitive theory proposes a positive relationship of self-efficacy with intensity/effort, control theory proposes a negative relationship (Bandura, 1991, 2012; Carver & Scheier, 2012). Control theory is a broad self-regulation theory that proposes that individuals set a goal, continuously evaluate their progress, and adjust their intensity depending upon their goal progress and beliefs about the likelihood of goal accomplishment (Carver & Scheier, 1981, 2012). Control theory, which focuses on discrepancy reduction, proposes that as job seekers feel more confident in their capabilities to obtain a job (i.e., accomplish the goal), they are more likely to reduce their intensity (Carver & Scheier, 1981, 2012). Individuals rely on external and internal cues to estimate the likelihood of goal accomplishment, relying on internal cues, such as self-efficacy, when clear external cues are lacking (Carver & Scheier, 1981, 2012; da Motta Veiga & Turban, 2014; Schmidt & DeShon, 2010). These internal cues provide a signal of whether to increase, maintain, or decrease one's intensity to accomplish the goal. For example, increased self-efficacy (i.e., greater confidence about reaching one's goal) is expected to lead to reduced intensity whereas decreased self-efficacy might lead to an increase in intensity (Carver & Scheier, 2012).

Thus, variations in self-efficacy, which is a within-person variable, may have a different relationship with intensity than between-person differences in self-efficacy (Vancouver & Kendall, 2006; Vancouver et al., 2001). For example, an experimental study examining air traffic control performance found that self-efficacy was negatively related to performance at the within-person level but positively related to performance at the between-person level (Yeo & Neal, 2006). Similarly, using an experimental study in which participants completed anagram tasks, self-efficacy was positively related to performance at the between-person level whereas the relationship was negative at the within-person level, although only for subjects without clear cues about their performance (Schmidt & DeShon, 2010). Note, however, that because it is unclear whether such results generalize beyond experimental settings, scholars have called for research in field settings (Yeo & Neal, 2006).

In summary, various studies have attempted to understand when self-efficacy will be positively, negatively or not related to intensity. For example, Vancouver and Purl (2017) presented a computational model that explains the seemingly contradictory predictions of social cognitive theory and control theory. However, most of the prior research investigating within-person self-efficacy has been conducted in a laboratory setting (see meta-analysis by Sitzmann & Yeo, 2013). We contribute to the understanding of how self-efficacy is related to intensity by examining, in a field study, the employment self-efficacy of actual job seekers.

2.2. Employment self-efficacy in job search

The few studies that investigated the relationship of within-person job search self-efficacy with job search intensity have provided mixed results, perhaps in part because these studies used different time lags and different operationalizations of job search self-efficacy. For example, job search behavior self-efficacy, operationalized as confidence in one's ability to conduct job search activities, was measured every two weeks and was positively related to job search intensity (Wanberg, Glomb, Song, & Sorenson, 2005). However, (re)employment self-efficacy, confidence in attaining employment, was not related to next-day effort (Wanberg et al., 2010). Liu et al. (2014) further proposed that job search behavior self-efficacy is a different construct than employment self-efficacy and collected data from job seekers twice a week to investigate whether and how these measures of self-efficacy were related to job search intensity. They found that job search behavior self-efficacy was positively related to intensity, consistent with social cognitive theory (Bandura, 1991, 2012), whereas employment self-efficacy was negatively related to intensity, consistent with control theory (Carver & Scheier, 1981, 2012).

In an attempt to provide insight into the role of self-efficacy in the job search process, we focus on employment self-efficacy, which we define as job seekers' confidence in their ability to successfully obtain employment. Considerable research, using between-subject designs, has examined job seekers confidence in their ability to obtain employment, although researchers have used different terms to describe this construct (Feather & O'Brien, 1987: outcome expectations; van Hooft & Crossley, 2008: perceived control over job-search outcomes; Vinokur & Caplan, 1987: perceived instrumentality). We adopt a self-regulation framework to theorize about the role of job seeker's confidence in their ability to find employment, although, as indicated above, it is an important construct for other theoretical perspectives, albeit with different terms.

¹ Job search intensity and effort have been used to measure the extent to which individuals spend time job seeking or engage in job search activities, and tend to be used interchangeably in the job search literature.

Self-regulation processes, such as job search, involve a goal setting and a goal monitoring process, with self-efficacy theorized to play a role in both processes (e.g., Bandura, 2012; Carver & Scheier, 2012). More specifically, both social cognitive theory and control theory propose that individuals with higher chronic self-efficacy will set higher goals (Bandura, 2012; Carver & Scheier, 2012; Yeo & Neal, 2006). Thus, we expect that job seekers with higher employment self-efficacy, will set higher goals, and thus exert more intensity to accomplish these goals compared to individuals with lower self-efficacy. Furthermore, individuals with higher chronic self-efficacy are more likely to maintain their intensity following set-backs and negative feedback compared to individuals with lower self-efficacy. Indeed, a meta-analysis of between-subjects studies reported a positive relationship between self-efficacy and job search intensity (Kanfer et al., 2001). Consistent with that result, we expect that job seekers with higher chronic employment self-efficacy will exert more intensity toward finding a job than job seekers with lower employment self-efficacy.

Hypothesis 1. Between-person chronic employment self-efficacy will be positively related to job search intensity.

Researchers have become increasingly aware that to understand self-regulated processes, such as job search, researchers need to collect repeated measures across time to model the dynamic, within-person relationships among variables (e.g., da Motta Veiga & Gabriel, 2016; Liu et al., 2014; Lord et al., 2010). In particular, such research is important given that between-person and within-person relationships of variables, such as self-efficacy with effort, are not identical (Kozlowski & Klein, 2000; Sun et al., 2013). We theorize that changes in self-efficacy during the job search provide information about whether the job seeker has reduced the discrepancy between the desired and current situation (Carver & Scheier, 1981, 2012). Specifically, we theorize when job seekers experience increased confidence in their ability to obtain employment (i.e., internal cue about progress made toward their goal), they are more likely to reduce their intensity.

Hypothesis 2. Within-person transient employment self-efficacy will be negatively related to job search intensity.

2.3. Perceived progress in job search

As noted above, the job search begins when individuals perceive a discrepancy between their current and their desired employment status. As job seekers conduct their job search, they evaluate the extent to which they are making progress toward the goal of finding a job, and interpret changes in perceived progress as a signal of whether to change the intensity of their behaviors (upward or downward) in order to reach their goal (e.g., obtain employment). Note, however, that different theories make different predictions about the relationship of perceived progress with intensity. For example, social cognitive theory proposes that perceiving progress toward goal attainment is rewarding and thus has a positive influence on motivation (Bandura, 1991, 2012). In support of this proposition, Uy, Foo, and Ilies (2015) found a positive relationship between perceived progress and entrepreneurial effort intensity. In another study, with a diverse sample of 238 employees who completed over 11,000 surveys, Amabile and Kramer (2011) found that making progress on meaningful goals had the strongest influence on motivation. In contrast, control theory predicts a negative relationship of perceived progress with motivation (Carver & Scheier, 1981, 2012). For example, job seekers with decreases in perceived progress are theorized to increase their intensity in order to accomplish the goal of finding employment. However, job seekers with increases in perceived progress, who are theorized to have multiple goals, will either maintain or reduce their intensity to focus on other goals.

Although perceived progress is thought to influence intensity toward goal accomplishment, the only two job search studies we found that examined the within-person relationship of perceived progress with job search intensity provided mixed evidence (Liu et al., 2014; Wanberg et al., 2010). Wanberg et al. (2010) found that within-person perceived progress was negatively related to time spent searching for a job the following day. In contrast, Liu et al. (2014), using a within-subject design, found a positive correlation between perceived progress and job search intensity. When examining indirect relationships they found that perceived progress was indirectly and positively related to intensity via job search behavior self-efficacy but was negatively related to intensity via employment self-efficacy (Liu et al., 2014).

Although evidence is mixed, we expect that, consistent with control theory (Carver & Scheier, 1981, 2012) within-person perceived progress will have a negative relationship with subsequent intensity. More specifically, we expect that as job seekers are working toward accomplishing the goal of finding employment, they will interpret decreased progress as a signal that more intensity is needed to accomplish the goal whereas increased progress signals they do not need to exert as much intensity in their job search (i.e., reprioritize their goals).

Hypothesis 3. Within-person perceived progress will be negatively related to job search intensity.

Although self-regulation frameworks call for a within-person approach, they also highlight the need to examine whether and how between-person differences influence within-person processes (Carver & Scheier, 2012; da Motta Veiga et al., 2018). For example, Wanberg et al. (2010) found that between-subject differences in financial hardship and action-state orientation moderated within-person self-regulation processes in the job search. Other studies reported that between-person differences in regulatory focus (Sun et al., 2013) and learning goal orientation (da Motta Veiga & Turban, 2014) moderated within-person self-regulation processes in the job search. We extend such research and examine whether job seekers' chronic employment self-efficacy moderates the relationships of perceived progress with job search intensity.

Specifically, we expect that job seekers' chronic employment self-efficacy will influence how job seekers react to changes in their perceived progress. As we noted earlier, job seekers with higher chronic employment self-efficacy are more likely to maintain job search intensity when they experience disappointment and negative feedback than job seekers with lower chronic self-efficacy. In

contrast, job seekers lower in chronic employment self-efficacy will be more sensitive to external and internal cues about progress toward goal accomplishment. Note that the behavioral plasticity hypothesis posits that individuals with lower self-esteem or chronic self-efficacy are more influenced by environmental and social cues than individuals with higher self-esteem (Brockner, 1988; Turban & Keon, 1993). Thus, we theorize that chronic employment self-efficacy will moderate the within-person relationship of perceived progress with job search intensity such that job seekers with lower chronic self-efficacy will be more influenced by their perceptions of progress than job seekers with higher chronic self-efficacy. Job seekers higher in chronic self-efficacy are expected to maintain job search intensity regardless of their perceived progress.

Hypothesis 4. Chronic employment self-efficacy moderates the negative relationship of increased perceived progress with job search intensity such that the relationship is stronger for job seekers with lower chronic self-efficacy.

3. Method

3.1. Sample and procedure

We used the College of Business Career Services office at a large Midwestern university to recruit new labor market entrants who were actively seeking a full-time job. The participants were asked to complete online an initial survey and 5 bi-weekly (every other week) surveys during their job search. The initial survey included demographic questions (gender and GPA) and measured chronic employment self-efficacy. The five bi-weekly surveys assessed perceived progress, transient employment self-efficacy, and job search intensity. We chose bi-weekly measurements to allow enough time for our within-person variables to vary (e.g., da Motta Veiga & Turban, 2014), especially since job seeking is not the only activity keeping students occupied. Furthermore, we collected data between September and November, which is consistent with prior research (da Motta Veiga & Gabriel, 2016; Liu et al., 2014), using the College of Business' career fair as the starting point for our data collection. Consistent with research in other domains (e.g., measurement of positive and negative affect at different time intervals; Deng, Wu, Leung, & Guan, 2015; Trougakos, Beal, Cheng, Hideg, & Zweig, 2015; Watson, Clark, & Tellegen, 1988), we measured chronic employment self-efficacy by asking participants to report their level of employment self-efficacy "in general". In contrast, we measured transient employment self-efficacy by asking them to report their level "in the last two weeks", which refers to specific time intervals during the job search process.

Although 158 participants completed the first survey, 47 were dropped because they completed only one bi-weekly survey.² Thus, analyses are based on the 111 participants who provided 381 bi-weekly surveys for an average of 3.43 surveys per participant. The overall response rate was 68% with weekly response rates ranging from 64% to 93%. Our sample was predominantly female (59%) with an average age of 22, and average GPA of 3.46.

3.2. Measures

3.2.1. Chronic employment self-efficacy

We measured chronic employment (i.e., between-person) self-efficacy, in the initial survey, using 2 items ($\alpha = 0.78$) from Brown, Cober, Kane, Levy, and Shalhoop (2006), who adapted items from Ellis and Taylor (1983). Participants were asked to "indicate the extent to which you agree with the following statements in general" using a scale ranging from 1 = strongly disagree to 5 = strongly agree. The items were: "My qualifications for employment are better than most people" and "Organizations generally view people like me as good candidates for employment."

3.2.2. Transient employment self-efficacy

We measured transient employment self-efficacy in the bi-weekly surveys using the same 2 items from Brown et al. (2006), and asked participants to "indicate the extent to which you agree with the following statements in the last two weeks" using the same 5-point scale. The average reliability across bi-weekly surveys was 0.82.

3.2.3. Perceived progress

We measured perceived progress in the bi-weekly surveys using two items from Wanberg et al. (2010). Participants were instructed to "indicate the extent to which you agree with the following statements in the last two weeks" using a scale ranging from 1 = strongly disagree to 5 = strongly agree. Items were: "I made good progress on my job search" and "I moved forward with my job search." The average reliability across bi-weekly surveys was 0.82.

3.2.4. Job search intensity

We measured job search intensity bi-weekly using a 4-item shortened version of Saks and Ashforth (2002)'s 14-item scale. For each of the items, participants were instructed 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 average reliability across bi-weekly surveys was 0.80.

² We compared participants who completed only the initial survey with those who completed the initial survey and at least two bi-weekly surveys, and found no significant differences in gender, GPA, and chronic employment self-efficacy.

Table 1
Means, standard deviations (S.D.), and inter-correlations between study variables.

Variable	Mean	S.D.	1	2	3	4	5	6
Within-person correlations (Level-1)								
1. Perceived progress	3.75	1.09	–	0.40*	0.44*	0.16	–0.14	–0.03
2. Transient employment self-efficacy	3.94	0.68	0.10	–	0.05	0.54*	–0.07	–0.04
3. Job search intensity	3.42	1.00	0.36*	–0.07	–	0.10	–0.15	–0.18*
Between-person correlations (Level-2)								
4. Chronic employment self-efficacy	3.99	0.65				–	0.05	–0.02
5. Gender	1.59	0.49					–	–0.06
6. GPA	3.45	0.41						–

Note. Correlations above the diagonal represent between-person (aggregated) scores (Level-1 $n = 111$). Correlations below the diagonal represent within-person scores (Level-2 $n = 381$).

* $p < .05$ (two-tailed tests).

3.2.5. Control variables

Consistent with prior research we controlled for job seeker gender and grade point average as these characteristics may influence job search intensity (da Motta Veiga & Turban, 2014; Liu et al., 2014; Sun et al., 2013).

4. Results

4.1. Analytical strategy

As the first step in our analyses, we examined whether there was sufficient within-person variance in the bi-weekly variables by running intercept-only (null) models. Results indicated that for job search intensity, 58% of the total variance was within-person; 54% for perceived progress; and 48% for transient employment self-efficacy. These results indicated sufficient within-person variance to support the use of hierarchical linear modeling (Singer & Willett, 2003).

We thus used hierarchical linear modeling (HLM 7.01; Raudenbush, Bryk, & Congdon, 2013) to test the hypotheses. The Level-1 variables (employment self-efficacy, perceived progress, and job search intensity) were within-person, and the Level-2 variables (gender, GPA, and chronic employment self-efficacy) were between-person variables. We used person-mean centering for the Level-1 predictor variables (Singer & Willett, 2003) to control for between-person variance in the scores, and allowed the centered Level-1 variables to represent the within-person change across time periods (Singer & Willett, 2003). The Level-2 predictors (i.e., control variables and chronic employment self-efficacy) were centered around their sample mean (grand-mean centering). Grand-mean centering improves the interpretation of the intercept values and reduces multi-collinearity (Singer & Willett, 2003).

4.2. Hypotheses testing

Table 1 presents descriptive statistics and both within- and between-person correlations. We tested hypotheses by running lagged analyses³ (predictor at time t and job search intensity at time $t + 1$) (see Table 2). The effective sample size of observations was 233 for the lagged analyses.

Hypothesis 1, which proposed that chronic employment self-efficacy would be positively related to job search intensity, was supported, as shown in model 1 in Table 2 ($\beta = 0.15, p < .05$). Such results indicate that job seekers with higher chronic employment self-efficacy had greater job search intensity during the job search than job seekers with lower chronic employment self-efficacy.

Results also provided support for Hypothesis 2, which proposed that increased transient employment self-efficacy would be associated with subsequent decreased job search intensity. As shown in model 1, transient employment self-efficacy was negatively related to subsequent job search intensity ($\beta = -0.24, p < .05$). Such result indicates that as job seekers had increased employment self-efficacy (i.e., felt more confident about their capabilities to find employment), they subsequently lowered their job search intensity.

Hypothesis 3 proposed that increased perceived progress would be associated negatively with job search intensity. Interestingly, as shown in model 1, within-person perceived progress was positively related to subsequent job search intensity ($\beta = 0.19, p < .05$). Such result runs counter to our hypotheses, and indicate that increased perceived progress was associated with increased subsequent job search intensity.

Hypothesis 4 proposed that chronic employment self-efficacy would moderate the within-person negative relationship of perceived progress and job search intensity such that the relationship would be stronger for job seekers lower in chronic self-efficacy. Although we found that perceived progress was positively related to subsequent job search intensity, we nonetheless examined the

³ We also ran non-lagged analyses, by examining job search intensity measured at time t , and found similar results. Since lagged analyses provide a more robust test of our theory and hypotheses, we only present results from the lagged analyses.

Table 2
Results for job search intensity (time $t + 1$).

Independent variable (t)	Job search intensity ($t + 1$)			
	Model 1		Model 2	
	β	SE	β	SE
Intercept	3.69*	0.07	3.69*	0.07
Within-person effects (Level-1)				
Perceived progress	0.19*	0.09	0.15*	0.07
Transient employment self-efficacy	-0.24*	0.12	-0.26*	0.11
Job search intensity	0.03	0.10	0.05	0.10
Perceived progress \times chronic ESE	-	-	-0.20*	0.08
Between-person effects (Level-2)				
Chronic employment self-efficacy (ESE)	0.15*	0.07	0.15*	0.08
Gender (1 = female; 2 = male)	0.02	0.16	0.02	0.16
GPA	-0.24	0.16	-0.23	0.16
-2 log-likelihood	370.01		365.48	
Pseudo R-squared	0.05		0.07	

Note: For $t + 1$: Level-1 $n = 233$, Level-2 $n = 79$. SE = robust standard errors.

* $p < .05$ (two-tailed tests).

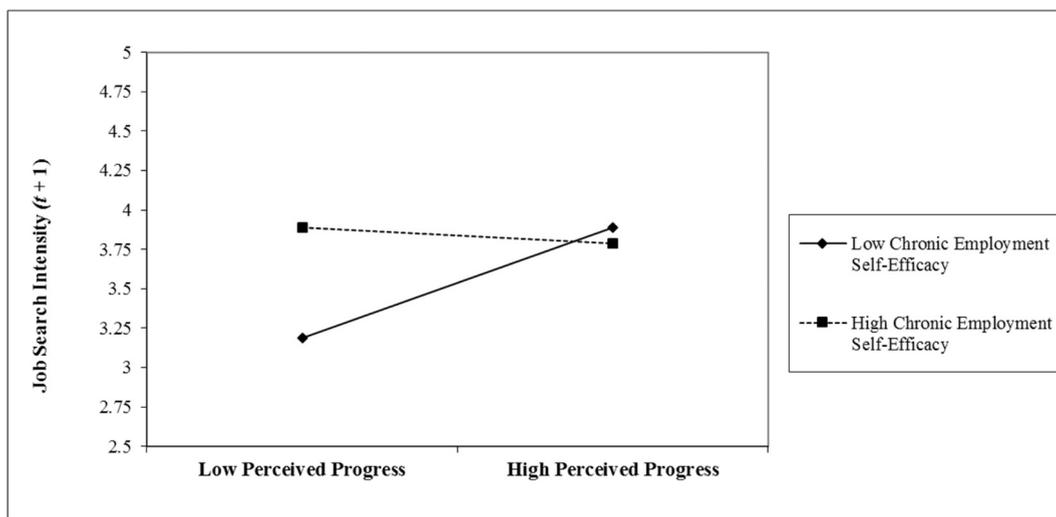


Fig. 1. Interaction between perceived progress and chronic employment self-efficacy predicting job search intensity (time $t + 1$).
Note. The interaction is depicted with the expected means plotted at ± 1 SD for perceived progress and chronic employment self-efficacy.

moderation. As shown in model 2, the interaction term was significant ($\beta = -0.20, p < .05$). To understand the nature of the interaction, we conducted simple slope analyses (Preacher, Curran, & Bauer, 2006) and plotted the interactions (see Fig. 1). The simple slopes analyses indicated that perceived progress was not related to subsequent job search intensity for job seekers high in chronic employment self-efficacy (-0.05) but was related positively for job seekers low in chronic employment self-efficacy ($0.32; p < .05$). Such results are consistent with the behavioral plasticity hypothesis, in that perceived progress was related to subsequent job search intensity only for individuals lower in chronic employment self-efficacy, although the relationship was positive rather than negative as we hypothesized.

5. Discussion

Self-efficacy and perceived progress both play a central role in self-regulation as individuals use such internal signals of whether an individual is getting closer to goal attainment when external signals are not directly available. Prior research has provided limited and mixed evidence about the role that these variables (i.e., employment self-efficacy and perceived progress) have on intensity regulation during job search (e.g., Liu et al., 2014; Saks et al., 2015; Wanberg et al., 2010). In terms of self-efficacy, prior research has confounded job search behavior self-efficacy with employment self-efficacy, with only a few studies differentiating between-person differences in chronic self-efficacy from within-person changes in transient self-efficacy during the job search. Our study thus makes three important contributions. First, we found that chronic between-person and transient within-person employment self-efficacy had opposite relationships with subsequent job search intensity, highlighting the importance of differentiating these constructs. Second,

and contrary to our hypothesis, we found a positive within-person relationship of perceived progress with intensity. Third, our finding that between-person chronic employment self-efficacy moderated the within-person relationship of perceived progress with subsequent job search intensity, provides further evidence that between-person differences moderate within-person self-regulation.

Given that prior job search research has put forth different conceptualizations and operationalizations of self-efficacy, we wanted to extend research and examine whether employment self-efficacy had a different between-person and within-person relationship with job search intensity. Results indicate that job seekers with greater chronic employment self-efficacy exerted greater job search intensity during the search compared to those with lower employment self-efficacy, which is consistent with social cognitive theory (Bandura, 1991, 2012). Notably, though, transient employment self-efficacy was negatively related to subsequent job search intensity, which is consistent with control theory (Carver & Scheier, 1981, 2012). This pattern of results provides further evidence that chronic and transient employment self-efficacy is different constructs.

Furthermore, as individuals work toward a goal, they evaluate the extent to which they are making progress toward achieving that goal and adjust their actions accordingly. Although we hypothesized a negative relationship of perceived progress with subsequent job search intensity, consistent with control theory predictions (Carver & Scheier, 1981, 2012), perceived progress was actually positively related to subsequent intensity. Such results indicate that when job seekers experienced increased perceived progress they subsequently increased their job search intensity, although this relationship was moderated by chronic employment self-efficacy. The positive within-person relationship of perceived progress with job search intensity is consistent with predictions that perceived progress results in a positive state that leads to enhanced effort (Amabile & Kramer, 2011; Bandura, 2012; Uy et al., 2015).

It is noteworthy to compare our results with the two other studies that examined perceived progress in the job search in terms of the time lag between measures and the pattern of relationship. Liu et al. (2014) reported positive relationships of perceived progress with subsequent intensity using semi-weekly (i.e., Wednesday and Sunday) measures, whereas Wanberg et al. (2010) found that daily measures of progress were negatively associated with time spent job seeking the following day. We used bi-weekly (i.e., every other week) measures and found that progress was positively associated with subsequent intensity. One possible explanation for the different pattern of results across studies is that the different time lags between measures led to differences in how the actions leading to progress were perceived. Evidence indicates that a temporal focus influences whether actions are seen as indicating progress toward goal accomplishment or as commitment toward the goal (Fishbach, Dhar, & Zhang, 2006). Specifically, a short-term temporal focus leads individuals to think about progress made toward goal accomplishment, which tends to lead to either maintaining or reducing effort, whereas a longer temporal focus is more likely to lead individuals to think about their commitment toward the goal, which tends to lead to increased effort (Fishbach et al., 2006; Koo & Fishbach, 2008, 2010). We urge future research to examine different time lags as well as mediating variables, such as positive affect, that may provide insight into the mechanism that leads to a positive or negative relationship between perceived progress and intensity.

Finally, research is starting to accumulate indicating that between-person differences moderate within-person processes in job search (da Motta Veiga & Turban, 2014; Sun et al., 2013; Wanberg et al., 2010). We extend such research by finding that the relationship of perceived progress with subsequent job search intensity was positive only for job seekers with lower chronic employment self-efficacy (i.e., lower belief in their ability to find employment). Job seekers higher in chronic self-efficacy maintained the same level of job search intensity regardless of their perceived progress. This pattern is consistent with the behavioral plasticity hypothesis (Brockner, 1988; Turban & Keon, 1993), as individuals low in self-efficacy/self-esteem are more influenced by environmental factors than individuals higher in SE. Furthermore, this finding suggests that future research should continue examining between-person differences that may influence within-person relationships in job search and other self-regulated processes (da Motta Veiga et al., 2018).

5.1. Practical implications

As job seekers who exert greater job search intensity tend to experience greater employment success (Kanfer et al., 2001; Saks, 2006), our results have some important implications. For example, job seekers and career counselors should understand that chronic confidence in one's ability to find employment is beneficial, given the positive relationship with job search intensity. Thus, career counselors might help job seekers develop their general confidence in their ability to obtain employment, while also emphasizing the need to maintain high levels of job search intensity. Furthermore, it is important for job seekers to realize that as they become increasingly confident in their ability to obtain employment, they tend to reduce their job search intensity. Given the positive relationship of job search intensity with employment success, job seekers should consider whether decreasing their job search intensity is warranted, or whether they are becoming too optimistic.

Our results indicate that perceived progress was related positively to increased job search intensity for job seekers with lower chronic employment self-efficacy. Job seekers should be encouraged to track milestones achieved during the job search (e.g., sending out resumes, getting invited for interviews) so job seekers realize the progress made toward finding employment. More broadly, career counselors might encourage job seekers to think about how their actions and progress demonstrates their commitment to the job search process in an attempt to help job seekers maintain or increase their intensity. In particular, a focus on the motivating potential of perceived progress in the job search may be particularly important for job seekers who have lower chronic confidence in their ability to find employment.

5.2. Limitations and directions for future research

Our examination of employment self-efficacy is simultaneously a strength and a limitation of our study. Indeed, it is important to gain a better understanding of whether and how job seekers' confidence in their ability to find employment influences the intensity they subsequently exert toward seeking employment. At the same time, future research could examine both job search behavior self-efficacy and employment self-efficacy at the within- and between-person levels, since they may have different theoretical and empirical implications (e.g., Liu et al., 2014; Saks et al., 2015; Yeo & Neal, 2006). Additionally, we examined job search intensity, which is an important predictor of job search success (Kanfer et al., 2001; Saks, 2006). Future research might also examine other job search outcomes, such as interview success and job attainment.

Although response rates remained relatively high, the number of responses decreased as the study progressed, which is common in repeated-measures studies in job search and other areas. Because we did not assess why participants did not respond 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. Furthermore, we captured bi-weekly responses during new labor market entrant's highly active job search period, which is a two-month period (i.e., between the Fall career fair and Thanksgiving; da Motta Veiga & Gabriel, 2016; Liu et al., 2014). Future research might examine longer time periods that can provide further insight into job choice decisions and allow for an increased number of responses per job seeker. Specifically, it could be interesting to capture the job search process from start to finish, although we acknowledge challenges in tracking applicants for extended time periods. Research examining job search outcomes along the process, such as first and second interviews, should be able to provide insight into whether and how early job search success is related to subsequent intensity. For example, do job seekers reduce their job search intensity after receiving an interview? How do between-person individual differences influence these reactions to early job search success?

We used a two-week time-frame to allow enough time for job seekers' self-efficacy, progress, and intensity to evolve and to address calls to extend the time frame of daily diary studies (da Motta Veiga & Turban, 2014; Wanberg et al., 2010). Although we believe, in our context, that the bi-weekly measure period was appropriate, relevant theory does not provide clear guidance for the best time frame. Additionally, based on evidence that different time lags influence whether individuals focus on goal commitment or goal process (Fishbach et al., 2006), research is needed to explicitly examine whether and how time lags influence within-person relationships during job search. For example, a field experiment could randomly assign job seekers to complete identical measures daily or bi-weekly to examine the effects of the time lag on self-regulation processes.

6. Conclusion

We urge scholars to continue examining self-regulation processes by collecting both chronic and transient variables, as such research is providing insight into such self-regulation. Indeed, we found that chronic employment self-efficacy is positively related to intensity, consistent with social cognitive theory whereas transient employment self-efficacy is negatively related to intensity consistent with control theory. We also found that perceived progress is positively related to intensity, although this relationship depends upon job seekers' chronic employment self-efficacy. Overall, repeated-measures studies of self-regulation processes not only help answer questions, but also raise new questions. For example, what is the optimal time lag between measures and does the time lag influence the pattern of relationships? It is important for research to investigate both within- and between-person variables involved in self-regulation processes while also taking into account different time lags (i.e., daily vs. weekly vs. monthly).

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