ABSTRACT

Title of Document: JOB SEARCH EXPERIENCES: A WITHIN-PERSON EXAMINATION OF JOB SEARCH SELF-EFFICACY, BEHAVIORS, AND OUTCOME

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A dynamic self-regulatory perspective is useful to explain within- and between-person variations in job search behaviors (e.g., Barber, Daly, Giannantonio, & Phillips, 1994; Kanfer, Wanberg, Kantrowitz, 2001). However, few studies have incorporated models and designs appropriate for addressing when and why individuals are persistent in their job search activities. In addition, although goal orientation and attribution are highly relevant to self-regulation, previous studies on job search have not integrated these important constructs into the dynamic model of job search. Using data from college seniors in China, the current study advanced the understanding of the dynamic pathways leading to job search behaviors and number of job offers. Specifically, conceptualizing job search behaviors as guided by the employment goal and its sub-goal job search behavior goal, the current study differentiates employment self-efficacy from job search behavior self-efficacy. The data showed that at the within-person level, higher levels of perceived job search

progress lead to more job search behaviors through enhanced levels of job search behavior self-efficacy. At the same time, higher levels of perceived job search progress could also lead to less job search behaviors through elevated employment self-efficacy. Finally, active job search behaviors were positively related to the number of job offers received by job seekers. The data also suggest that performance goal orientation and attribution moderated the within-person relationship between perceived job search progress and self-efficacy believes. These findings are discussed in terms of their theoretical implications to multiple goal theories regarding dynamic self-regulation processes and practical implications to employment interventions.

JOB SEARCH EXPERIENCES: A WITHIN-PERSON EXAMINATION OF JOB SEARCH SELF-EFFICACY, BEHAVIORS, AND OUTCOME

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INTRODUCTION

Research Overview

Work is a source of identity, self-esteem, income and security, and most importantly, purpose in life (Hulin, 2002). Searching for work opportunities, therefore, represents one's pursuit of autonomy, self-worthiness, achievement, and happiness. In recent years, perhaps due to the changes in the economic climate, more relaxed organizational structure commonly used by business, and increased employee mobility (Sullivan & Arthur, 2006), job seeking has become a type of extremely common experience for adult workers (Schwab, Rynes, & Aldag, 1987; Kanfer et al., 2001; Saks, 2005; McKee-Ryan & Harvey, in press). For example, Bolles (2009) has suggested that in the U.S on average, workers under 35 years of age will go job-hunting every one to three years, while workers over 35 years of age will search for alternative employment opportunity every five to eight years. Similar statistics have been observed in other countries. In China, for example, the annual job change rate has increased significantly ever since the market reform back in the early 1980s (e.g., Bian & Huang, 2009), resulting in millions of workers joining the ranks of job seekers annually. Recently, due to the worldwide economic downturn, job search has becoming more and more challenging. Based on the data released by the U.S. Bureau of Labor Statistics in February 2011, an average job search takes 37.1 weeks to find a job. Given the challenging nature and the commonality of job search activities, it is not surprising that the job search experience has become an important research area for applied psychologists and management scholars from all over the world (e.g., Kulik, 2000; Wanberg, Kammeyer-Mueller, & Shi, 2001; van Hooft, Born, Taris, &

van der Flier, 2004; Belliveau, 2005; Song, Wanberg, Niu, & Xie, 2006; Boswell, Roehling, & Boudreau, 2006; van Hooft & Crossley, 2008; Van Hoye, van Hooft, & Lievens, 2009; Yanar, Budworth, & Latham, 2009; Song, Foo, Uy, & Sun, 2011; Swider, Boswell, & Zimmerman, 2011).

Current research on job search experiences has generally conceptualized job search as a process of self-regulation. For example, Kanfer et al. (2001) depicted job search as a purposive, volitional pattern of action that begins with the identification and commitment to pursuing an employment goal (p. 838). During job search, individuals generally undertake a variety of autonomous tasks (e.g., identify job leads and participate in personnel selection tests) and utilize a variety of personal resources (e.g., time, effort, and social resources) for the purpose of obtaining employment. Guided by the self-regulation framework, previous studies have found that job search behaviors and outcomes are associated with important variables in the self-regulatory process, such as self-efficacy (e.g., van Ryn & Vinokur, 1992; Brown, Cober, Kane, Levy, & Shalhoop, 2006), positive and negative emotions (e.g., Crossley & Stanton, 2005; Turban, Stevens, & Lee, 2009), and goal commitment (e.g., Prussia, Fugate, & Kinicki, 2001; Šverko, Zvonimir, Seršić, & Galešić, 2008).

It is important to note that previous studies utilizing a self-regulation framework were limited in several ways. First of all, self-regulation theory suggests that the job search experience is dynamic rather than static. For example, Kanfer et al. (2001) have suggested that over time, job search behavior may change in direction or intensity as self-reactions or feedback from the environment influence self-regulatory components, such as self-efficacy, employment goals, and search strategies.

However, most previous studies on job search have focused on between-person correlations among job search-related cognitions, emotions, and behaviors, failing to take into account the within-person fluctuations in the job search experiences. Consequently, these studies were unable to explain the persistency of job seeking behaviors, which has been shown to be important predictors of job search success (Wanberg, Glomb, Song, & Sorenson, 2005). Thus, it is important to develop dynamic models that are suitable for capturing the systematic variations in job search behaviors and outcome over both short and long time periods (Wanberg, Zhu, & van Hooft, 2010; Song, Uy, Zhang, & Shi, 2009; Liu, Zhan, & Wang, 2011).

Second, ambiguity exists in conceptualizing and clarifying the role of self-efficacy beliefs in job search, which could contribute to the inconsistent findings in previous studies (Yeo & Neal, 2006). In general self-regulation literature, the role of self-efficacy on task performance has generated numerous studies with divergent findings (e.g., Vancouver, Thompson, & Williams, 2001; Bandura & Locke, 2003). In the job search literature, different ways of framing job search self-efficacy also lead to discrepant findings even at the same within-person level of analysis (Wanberg et al., 2005; Wanberg et al., 2010). Furthermore, job search is a complex process which involves a hierarchy of goals (e.g., the overarching employment goal and the more specific job search behavior goal). Each goal is likely to be associated with a judgment of one's confidence in achieving the goal, namely a self-efficacy belief (Bandura & Locke, 2003). Thus, it is important to simultaneously examine the within-person effects of different types of self-efficacy beliefs (e.g., self-efficacy

regarding performing job search behaviors and self-efficacy regarding obtaining employment) on job search behaviors and outcomes.

Third, previous studies have provided limited understanding to the time-invariant (e.g., personality) and time-variant (e.g., momentary interpretation of goal experiences) boundary conditions of the dynamic feedback processes in job search. In particular, both goal orientation and causal attribution, which have been shown to be critical in the self-regulation process, might play important roles in the interpretation of environmental cues and the formation of efficacy beliefs during job search. Specifically, goal orientation was expected to moderate the effects of perceived job search progress because it influences individuals' cognitive and behavioral reactions to previous performance, feedback, and task perceptions (e.g., VandeWalle, Cron, & Slocum, 2001; Ilgen & Davis, 2000). However, it is unknown how job seekers' goal orientation may affect the relationship between job seekers' perceived goal progress and their self-efficacy beliefs. Similarly, previous studies have not considered the attribution process (i.e., situation-specific interpretation of reasons for goal progress) in the dynamic model of job search experiences. Nevertheless, it has been suggested in the literature that causal attribution could influence the development of self-efficacy, which in turn influences goal-striving behaviors (e.g., Ilgen & Davis, 2000; Tolli & Schmidt, 2008). In sum, examining the effects of goal orientation and attribution in the dynamic job search process helps to improve our understanding of self-regulation during job search.

Aiming to fill in these research gaps, the current study advanced the job search research in the following ways. First, a dynamic perspective was adopted in

studying job search behaviors. Based on self-regulation theories, I proposed a model examining the antecedents as well as a possible consequence of within-person variations in job search behaviors. From a theoretical point of view, a better understanding of when and why behaviors change during the courses of search may facilitate more comprehensive understanding of job search as a process. From a practical point of view, more timely and accurate assessments of the effective search behaviors may provide valuable information for job search interventions (Barber et al., 1994). Second, to further clarify the role of self-efficacy in the job search process, I differentiated self-efficacy regarding performing job search behaviors from self-efficacy regarding obtaining employment. I argued that these distinctions could help reconcile inconsistent predictions by previous research as well as better understand the pathways to achieve employment outcomes (e.g., number of job offers). Third, incorporating important boundary conditions of the self-regulation process into the dynamic job search model, I examined the effect of goal orientation and attribution as possible moderators of the relationship between perceived progress and efficacy beliefs on job search. This further extends theories related to job search process by integrating individual differences and cognitive processes into the self-regulation framework. Figure 1 depicted the hypothesized model. In the following section, I defined the content and nature of job search behaviors, introduced self-regulatory perspectives on job search, and developed my hypotheses accordingly.

Defining Job Search Behaviors

Job search is a process in which individuals identify, initiate, and pursue actions for the purpose of obtaining new employment or reemployment (Kanfer et al.,

2001). These activities, such as reading “help wanted” ads and inquiring about possible positions, determine the type and amount of information that job seekers obtain about job openings as well as the number of job opportunities from which a job seeker may choose.

The systematic research about job search experience started in early 1980s. At that time, most of existing theories on job search tended to use a decision making framework and focused on the job seekers only after job alternatives had been identified (e.g., expectancy theory by Vroom, 1966). For example, it was generally assumed that each job seeker has perfect knowledge of all available job opportunities. Under this assumption, the job seeker’s task is simply to compare the net advantages of the various alternatives, and then to choose the alternative that provides the greatest expected utility. Kanfer and Hulin (1985) conducted one of the earliest studies focusing on individuals’ job search skills and behaviors. The authors studied the reemployment outcomes of a sample of employees following their job termination. The results showed that reemployed persons were significantly more confident of job search skills and had engaged in a greater number of search behaviors than individuals who had remained unemployed. There are two important implications of this study. First of all, job search is costly rather than costless. Job leads do not simply present themselves and wait to be chosen by job candidates. It generally takes a great deal of mental and physical energy to access information related to the opening as well as the hiring organization. Second, this study suggests that reemployment success is related to individual differences in expectations on job search, which are different from their expectations on job performance. It is possible

for an individual to demonstrate a high level of skill and competence on work-related behaviors, but still perceive him or herself to be unskilled or less competent than others in job search skills. Thus, studying job search behaviors as a unique set of employment activities and job search self-efficacy as a unique task-related expectation is warranted.

Given the lack of knowledge about job opportunities in the labor market for an average job seeker, Schwab et al. (1987) discussed two dimensions of search that are believed to influence employment outcomes: (1) sources used to obtain information about job vacancies, and (2) the intensity of following up on this information. Regarding sources of information, research suggests that job seekers generally use and obtain employment information from both formal labor market sources (e.g., employment services, professional association, and internet) and informal social sources (e.g., friends and acquaintances). Regarding search intensity, Schwab et al.'s review suggests that there is a negative relationship between the extent to which individuals procrastinated before beginning their job searches and job-search success (Sheppard & Belitsky, 1966). They also suggest that job search intensity is positively related to likelihood of obtaining employment.

Based on Schwab et al.'s (1987) findings, Blau (1993, 1994) developed a typology that consists of two distinct job search behavior dimensions: preparatory job search behavior and active job search behavior. Preparatory job search behaviors involve gathering job search information and identifying potential leads during a planning phase (e.g., reading wanted ads). These behaviors enable job seekers to identify jobs and organizations that they desire and perceive to be a good fit. Active

job search behaviors involve the actual job search and choice process, such as contacting and interviewing with prospective employers. Research using between-person designs has shown that job seekers who devote more time to both preparatory and active job search behaviors are more likely to identify, generate, and obtain job opportunities that they perceive to be a good fit (e.g., Saks & Ashforth, 1999; Saks & Ashforth, 2002).

In addition to preparatory and active job search behaviors, networking as a job search method has been emphasized by current job search literature (e.g., Bolles, 2009). Supporting this emphasis, research on job search and reemployment suggests that a large proportion of jobs are found through contacting friends, family, or other acquaintances or contacts (e.g., Granovetter, 1995; Schwab et al., 1987; Petersen, Saporta, & Seidel, 2000). Building on previous work on networking behaviors of job seekers, Wanberg, Kanfer, and Banas (2000) developed a scale of networking behaviors and examined its predictive validity on a sample of unemployed job seekers. They found that networking intensity was significantly related to reemployment success, although it did not provide incremental prediction of unemployment insurance exhaustion, reemployment or reemployment speed, when preparatory and active job search intensity was controlled for. Two recent studies reported supportive findings regarding the utility of networking behaviors in job search. Tziner, Vered, and Ophir (2004) examined networking behaviors among a sample of college graduates. Their results showed that networking intensity was negatively related to length of unemployment, even after controlling for the effect of general job search intensity. Further, Van Hoye et al. (2009) examined whether the

structure and composition of job seekers' social network determined their networking behavior and moderated its relationships with job search and employment outcomes in a sample of unemployed Flemish job seekers. The authors found that job seekers with a larger social network and with stronger ties in their network spent more time networking. Networking explained incremental variance in job offers beyond job seekers' use of print advertising, the internet, and public employment services.

In terms of the nature and characteristics of job search behavior, previous literature has suggested that job seeking is a complex task with a multiplicity of strategies and stages (e.g., Barber et al., 1994; Saks, 2005). For most people this task is novel and ambiguous (Leana & Feldman, 1988; van Hooft & Noordzij, 2009). As a more formal description, Kanfer et al. (2001) conceptualized job search as a motivational, self-regulatory process, which was analogous to performing autonomous work, such as sales. Consistent with this conceptualization, most previous research has used a motivational framework to explain individual differences in job search behaviors. For example, Prussia et al. (2001) reported that reemployment coping intensity was significantly related to job search effort among a sample of displaced employees. Brown et al. (2006) suggested that job seekers' proactive personality and self-esteem positively influence their job search behavior through job search self-efficacy. In addition, job search behaviors have been shown to predict a number of employment outcomes, including number of interviews, number of job offers, employment status, and post-entry person-organization fit (e.g., Kanfer et al., 2001; Saks & Ashforth, 2002).

A few studies have conceptualized job search as a dynamic process, recognizing the significant within-person variability in job search activities over time. For example, Barber et al. (1994) showed that students decreased their job search intensity between early in their search and graduation and then increased their search between graduation and 3 months later. Kanfer et al. (2001) further suggested that the level of job-search behavior displayed by individuals at various times during their search results from a complex interplay of their personal tendencies, their current desire to obtain employment, and unique personal and social conditions. Specifically, over time, job search behavior may change in direction or intensity as self-evaluations or feedback from the environment influencing the self-regulatory components of job search, such as employment goals and search strategies. More recent studies (Wanberg et al., 2005; Wanberg et al., 2010) have shown that there are significant within-person variations among job search effort, which could be jointly predicted by individual differences (e.g., personality traits and commitment to employment goal) and situational variables (e.g., job search constraint and daily affect).

In sum, job search behaviors can be generally categorized into two unique classes: preparatory job search behavior and active job search behavior. In addition, a dynamic, self-regulatory perspective is suitable in understanding job search behaviors.

Conceptualizing Job Search from a Self-Regulatory Perspective

Self-regulation theories emphasize the active role of individuals in the process of determining their levels of effort and performance. For example, Karoly (1993) defined self-regulation as processes "that enable an individual to guide his/her goal-

directed activities over time and across changing circumstances." Vancouver (2000) specified several characteristics of self-regulation. First of all, self-regulation theories emphasize the active role of individuals in the process of determining their levels of effort and performance. Second, the importance of goals in directing individuals' attention and effort has received substantial empirical support (e.g., Locke & Latham, 1990). Third, to achieve or maintain a goal, the system must be able to act to affect its environment (i.e., through goal-directed behaviors). Fourth, a broader definition of self-regulation requires that the system has the capacity to access the current state of variable (e.g., on target or deviates from the desired state). In other words, to compensate for disturbances to a variable being maintained or to know when goal is attained, the system must know the current state of the variable.

Current research on the job search experiences has generally conceptualized job search as a process of self-regulation. Specifically, job search literature emphasized the active role of job seekers in obtaining interviews and job offers. For example, Latack, Kinicki, and Prussia (1995) depict job search behaviors as active, problem-focused coping strategies following job loss. Similarly, Brown et al. (2006) showed that individual's proactive personality was a significant predictor of job search success. In addition, Kanfer et al. (2001) as well as others (e.g., Saks, 2006) conceptualized job search as a form of goal-directed behavior; such that the employment goal activates search behaviors aimed to reach the goal. Furthermore, job search behaviors are effective means through which employment goal can be accomplished. For example, Kanfer et al.'s (2001) meta-analysis suggests that job search behavior is positively related to employment status, number of job offers, and

negatively related to unemployment durations. Finally, the self-regulatory perspective for job search also suggests that job search often involves continuous monitoring of search progress and continuous regulation of job search behaviors. These activities are largely guided by task-related perceptions (e.g., perceived goal progress) and self-referent thoughts, beliefs, and expectations (e.g., efficacy beliefs, job search goal clarity). For example, Turban et al. (2009) suggested that job seekers engaged in self-regulatory activities involving setting goals, developing plans, and monitoring and analyzing progress toward goals. They referred to these activities as meta-cognitive activities. Their results showed that these meta-cognitive activities were positively related to number of resumes submitted and number of first interviews received. In addition, Côté, Saks, and Zikic (2006) found that job search self-efficacy was positively related to job search goal clarity and job search intensity, which were related to job search success.

It is important to note that, among the self-regulatory constructs, self-efficacy has received the most attention in previous job search literature, likely due to its most proximal role in regulating human cognitive, motivational, affective, behavioral, and decisional processes (Bandura, 1986). Meanwhile, controversy exists regarding the effect of self-efficacy on individuals' effort and performance. In the following paragraphs, I will introduce two theories that conceptualize different effects of self-efficacy: social cognitive theory and control theory.

Social Cognitive Theory

The social cognitive theory emphasizes the human agency effect, which enable people to play a part in their self-development, adaptation, and self-renewal

with changing times (Bandura, 2001). Perceived self-efficacy occupies a pivotal role in the causal structure of social cognitive theory because efficacy beliefs affect adaptation and change not only in their own right, but through their impact on other motivational factors. Such beliefs influence whether people think pessimistically or optimistically and in ways that are self-enhancing or self-hindering. Efficacy beliefs play a central role in the self-regulation of motivation through goal challenges and outcome expectations. It is partly on the basis of efficacy beliefs that people choose what challenges to undertake, how much effort to expand in the endeavor, how long to preserve in the face of obstacles and failure, and whether failures are motivating or demoralizing. Specifically, with higher levels of self-efficacy, the expected utility of behaviors seems higher, because one's actions are seen as more likely to lead to desired outcomes. For example, previous research has suggested that higher levels of self-efficacy could lead to positive goal revision, which sustains effort and performance on pursuing the goal (Tolli & Schmidt, 2008). This phenomenon is also called positive feedback loop, referring to the spiral relationship of previous success leading to higher levels of self-efficacy which in turn leads to higher levels of future performance.

Numerous studies have supported the motivating effect of higher levels of self-efficacy at the between-person, within-person, and group levels of analysis. For example, at the between-person level of analysis, Cervone and Peake (1986) found that the higher the experimentally manipulated perceived self-efficacy, the longer individuals preserved on difficult and unsolvable problems before they quit. At the within-person level of analysis, Litt (1988) examined the intraindividual change in

self-efficacy and its effect on later behaviors. After being tested for pain tolerance on a cold-pressor test, individuals were led to believe that they were either at a high (90th) or at a low (37th) percentile rank in pain tolerance compared with an ostensibly normative group, regardless of their actual performance. The bogus normative information produced differential levels of perceived efficacy, which in turn, were accompanied by corresponding changes in pain tolerance. The greater change in perceived self-efficacy, the larger the change in pain tolerance. At the group level of analysis, Whitney (1994) found that experimentally manipulated group efficacy was positively related to group performance on an interdependent task.

In sum, the social cognitive theory recognizes the motivating and behavior-generating effect of self-efficacy, such that higher levels of self-efficacy usually lead to more effort and more persistency on the task.

Control Theory

Vancouver (2000) classified control theories as belonging to the cybernetic-systems paradigm of self-regulation, which desires to understand the observation of stability in open systems when their environments would suggest instability. Control theories are interactional and dynamic in that they describe how properties of the system and properties of the environment feed back and change each other over time (Powers, 1973; Carver & Scheier, 1998; Vancouver, 2005). The theory also elaborates upon the concept that some variable in the system's environment can be maintained at or moved to a desired level, called the goal level, by acting on the variable when the perception of the variable deviates from the goal. Specifically, the system inputs information from the environment, which creates the perception

regarding progress toward the goal; then the system's comparator function, creates the deviation or discrepancy when perception and goal differ; then the system's output function creates the actions on the variable when it receives a discrepancy signal. Meanwhile, disturbances from the environment can also be acting on the variable. The system does not need to know the nature of the disturbances, only the current state of the variable. A natural example of this is seen in how humans and other warm-blooded organisms maintain their body temperature by continually monitoring it and activating mechanisms to maintain or dissipate heat as discrepancies between desired and perceived body temperature are detected. These discrepancies are reduced without concerning the source of changes, provided that the changes are not so great as to not overwhelm the mechanisms at their disposal.

Compared with the social cognitive theory, the control theory perspective has its own explanation of self-efficacy. Specifically, Vancouver and colleagues (Vancouver et al., 2001; Vancouver, 2005) suggested that self-efficacy reflects how signals from the output function and other subsystems are weighted when creating an anticipated or estimated perception from memory for some focal subsystems. In other words, self-efficacy reflects the accumulation of expectancies related to the numerous subsystems thought to be relevant to achieving specified levels of performance. When the goal processes involve planning or revising, the relatively higher anticipated perceptions arising from relatively higher self-efficacy levels would lead individuals to accept or remain with the goals they are thinking about or currently pursuing, respectively. That is, self-efficacy would be expected to positively relate to accepting

difficult goals or persistence in the face of frustrations. This prediction is consistent with the prediction of the social cognitive theory (Bandura & Locke, 2003).

However, the control theory also offers a unique prediction regarding the effect of self-efficacy. Specifically, when the estimated perceptions are to be used to assess current states in an ongoing activity, the relatively higher estimates associated with higher self-efficacy would likely result in the control systems reaching their goal levels more readily than lower estimates. This effect would result in a negative relationship between self-efficacy and performance, depending on the degree to which current performance perceptions were estimated rather than assessed from direct stimuli. Consistent with this prediction, For example, lab experiments conducted by Vancouver and colleagues (e.g., Vancouver et al., 2001; Vancouver, Thompson, Tischner, & Putka, 2002; Vancouver & Kendall, 2006) have shown that positive self-efficacy regarding achieving certain level of performance can be negatively associated with subsequent task performance on a guessing game, when high self-efficacy leads one to coast, but low self-efficacy motivates greater effort expenditure. These findings were also replicated by Yeo and Neal (2006), using a simulated air traffic control task.

In sum, the control theory perspective recognizes the demoralizing effect of self-efficacy, such that higher levels of self-efficacy means lower perceived discrepancy between the current state and the goal, which could cause the individuals to slow down or reduce effort in achieving the goal.

Reconciling Different Theoretical Predictions Using A Goal Hierarchy Perspective

Based the earlier review of social cognitive theory and control theory, it seems that they offer contradictory predictions regarding the effects of self-efficacy in mobilizing effort to achieve the goal. However, these contradictory predictions might be reconciled by recognizing the existence of goal hierarchies in self-regulatory processes. At any given time, most of us have many goals we could be pursuing, though we often find ourselves focusing on only one (Vallacher & Wegner, 1987). Likewise, research on motivation and goal processes has tended to focus on processes involved in pursuing a single goal, despite the recognition that multiple-goal pursuit is the norm, not the exception (Austin & Vancouver, 1996; Vancouver et al., 2010). More importantly, the multiple goals we are simultaneously pursuing are often hierarchically structured within the individual such that higher-level goals are distal desired states and lower level goals are means to obtain the higher level goals (DeShon & Gillespie, 2005). This notion of goal hierarchy invoked here is consistent with the action identification theory (Vallacher & Wegner, 1987). According to action identification theory, people can think about their actions in various levels of meaning. For example, the same job search act can be constructed as "revising my resume" and "investing in my career". Each of these hierarchical levels represents a feedback subsystem, whereby the results of output on true states are perceived and compared with the relevant standard.

For example, getting a promotion may be the higher-level goal, and superior performance may be the means to achieve the higher-level goal. As such, at any given time, employees' effort on the job is simultaneously guided by the promotion goal as well as performance goal. Consequently, employees continually monitor their

progress on both goals and make a judgment of how much effort to exert on job-related activities. A highlighted promotion goal (e.g., larger perceived discrepancy between the current promotion prospect and the promotion goal) could activate the performance goal, because achieving good performance may lead to reduced discrepancy and the fulfillment of promotion goal. When both goals are activated (e.g., when promotion and high job performance are both likely and rewarding), individuals are likely to put in more effort in job-related activities.

In addition, individuals could form self-regulatory cognitions regarding goals at different levels. In particular, corresponding to each goal, individuals may form self-efficacy beliefs, such as self-efficacy regarding being promoted and self-efficacy regarding performing effectively. Both types of self-efficacy beliefs could influence job performance. Specifically, at the lower level (i.e. efficacy regarding means influences effort on means), self-efficacy regarding performing effectively might be positively related to job-related effort, because of the expected payoff of working hard might be higher for individuals who have higher level of performance self-efficacy (Bandura, 2001). This is consistent with the prediction of the social cognitive theory. However, the cross-goal-level effect of promotion efficacy on job performance might be negative because higher levels of promotion self-efficacy could be interpreted as lower discrepancy between the current state and the desired goal (i.e., promotion). Therefore, the negative feedback loop could divert individuals' attention to other goals (e.g., work-family balance) when the current goal (getting promoted) is close to achievement. This is consistent with the prediction of the control theory. In other words, when promotion goal is deactivated because of

perceived lack of discrepancy regarding this higher-level goal, performance goal is also deactivated (assuming performance only serves to achieve the promotion goal). Thus, employees may spend less time on job-related activities. However, this deactivation/inhibition effect is not symmetric, as performing well and having higher levels of efficacy regarding achieving good performance would not inhibit the promotion goal before the promotion goal is satisfied.

In sum, the hierarchical (i.e., means-ends) structure of goals suggests that self-efficacy regarding lower-level goals (i.e., means[1]) could be positively related to effort invested toward the means, while self-efficacy regarding higher-level goals could be negatively related to effort invested toward the means. By fitting the social cognitive theory and the control theory to different goal levels, the hierarchical goal conceptualization of self-regulatory behaviors is able to incorporate seemingly contradictory predictions in the same model. According to this perspective, when higher-level goals and means (i.e., lower-level goals) are less distinguishable (e.g., in Vancouver et al., 2001; the goal is to guess correctly within a certain number of attempts and the means is to make a guess), the measure of self-efficacy confounds self-efficacy regarding performing the task (i.e., means) and self-efficacy regarding achieving the goal. Therefore, it is not surprising that this type of self-efficacy was positively related to performance in some cases (e.g., Litt, 1988) but negatively related to performance in other cases (e.g., Vancouver et al., 2001). However, in a naturalistic setting, when the means-ends goal hierarchy can be distinguished, previous findings are largely consistent with the prediction of the current model. For example, in the case of job search, job search behaviors serve as the means to achieve

the employment goal. Previous finding suggests that when people are more confident about their ability to perform job search related behaviors (i.e., higher self-efficacy at the lower goal level), they are more likely to invest more effort in job search subsequently (Wanberg et al., 2005). Further, in the case of weight loss, dieting serves as the means to reduce weight. Previous finding suggests that when people perceive themselves close to desired weight (i.e., higher self-efficacy at the higher level), they are more likely to choose a chocolate bar over an apple as a parting gift (i.e., investing less effort on dieting; Fishbach & Dhar, 2005).

Drawing on the above argument, I conceptualized daily job search behavior as guided by two hierarchically structured goals: the overarching employment goal (i.e., ends or the higher-level distal goal) and the more concrete search behavior goal (i.e., means or the lower-level proximal goal). I argued that job search behaviors are guided by these two goals simultaneously. Corresponding to these two goals, the current study differentiated two types of self-efficacy according to their levels of meaning. Specifically, job search behavior self-efficacy refers to job seekers' self-efficacy regarding performing job search behaviors and employment self-efficacy refers to job seekers' self-efficacy regarding obtaining employment. In the following paragraphs, I argued that these two types of self-efficacy beliefs may have a common predictor, perceived job search progress, but differential relationships with job search behaviors, as predicted by the self-regulation process governed by the hierarchical goal structure.

Hypotheses Development

Goal Progress and Self-Efficacy in Job Search

Extant research using both experimental design and survey method has provided support for the role of self-efficacy in predicting job search effort. For example, Eden and Aviram (1993) have found that job search interventions aiming at increasing job seekers' self-efficacy lead to increased frequency of their job search behaviors as well as better employment outcomes. Wanberg, Kanfer, and Rotundo (1999) have shown that individual differences in job search self-efficacy are positively related to job search intensity among a sample of unemployed job seekers. Saks and Ashforth (1999) reported that job search self-efficacy was positively related to both preparatory job search behavior and active job search behavior, which in turn predicted employment status among a sample of university graduates. In sum, between-person studies have generally supported the facilitating role of self-efficacy in the job search process (Kanfer et al., 2001), similar to its effect on job performance (Stajkovic & Luthans, 1998).

Recently, researchers have started to use within-person designs to examine the dynamic relationships between job search self-efficacy and job search behaviors. Specifically, Wanberg et al. (2005) examined job search intensity over time in a 10-wave longitudinal study of unemployed individuals. They found that job search intentions mediated the positive relationship between job search behavior self-efficacy (i.e., self-efficacy regarding performing job search behaviors) and job search intensity in the following two weeks. On the other hand, Wanberg et al. (2010) conducted daily survey over three weeks on a sample of unemployed individuals. They found that after controlling for the effect of perceived job search progress and daily affect, daily employment self-efficacy (i.e., self-efficacy regarding obtaining

employment) was not significantly related to time spent on job search in the next day. The inconsistent findings between these two studies could be due to the different operationalizations of efficacy beliefs on job search used by researchers. Specifically, Wanberg et al. (2005) used a *behavior self-efficacy* measure (i.e., confidence in performing the job search behavior), with the item "How confident are you about being able to conduct your job search well?" While Wanberg et al. (2010) used an *outcome self-efficacy* measure (i.e., confidence in goal/employment attainment), with a sample item "How confident are you that you would land a job as good as or better than the one you left?" These two efficacy measures are likely capturing job seekers' confidence in achieving behavioral goal and outcome goal respectively.

It is important to note that the extent to which behavior self-efficacy and outcome self-efficacy overlap with each other depends on the nature of the task (e.g., Gist, 1987). When the outcome is largely determined by individual effort, behavior self-efficacy and outcome self-efficacy should be closely related. For example, in studies using lab tasks, self-efficacy is often defined as the confidence in achieving certain levels of performance (Vancouver et al., 2001; Yeo & Neal, 2006). This is largely because in a controlled and static task environment, one's behaviors could directly translate into task performance. Thus, behavior self-efficacy and outcome self-efficacy may not be easily separated in those research scenarios. For example, in Vancouver et al. (2001), the goal was to guess the number correctly within a certain number of trials, and the behavior was to make a guess. Thus, it is essentially impossible to differentiate outcome self-efficacy from behavior self-efficacy.

In the context of job search, behavior self-efficacy reflects one's belief about how well one can perform tasks related to job search (e.g., Saks & Ashforth, 1999; Côté et al., 2006), for example, whether job seekers can prepare a good resume and whether job seekers are comfortable in the interview process (van Ryn & Vinokur, 1992). While job seekers' outcome self-efficacy (i.e., self-efficacy regarding obtaining employment) reflects their judgment of how likely they will land a desirable job. It is obvious that procuring desired employment is not entirely determined by one's job search activities (Kanfer et al., 2001; Tay, Ang, & Van Dyne, 2006; van Hooft et al., 2004). Other than one's proficiency in job search related tasks, job seekers' qualifications, social capitals, and job market situations are also major determinants of the probability of desirable employment. Specifically, one job seeker who is confident about handling job search related activities (e.g., submitting applications and meeting potential employers) may have limited faith in obtaining employment due to a hiring freeze on the job market. Further, at the within-person level, momentary job search behavior self-efficacy could be distinctive from momentary employment self-efficacy. For example, when a job seeker learns that a company he/she is interested in will recruit more employees than previously planned, he or she may perceive better chance to be employed; however, this event may not increase his/her confidence about performing the tasks related to job search. Thus, in the current study, I examined job search self-efficacy and employment self-efficacy (i.e., confidence in employment) as two separate constructs.

Previous studies have suggested that efficacy beliefs are context specific, such that one might expect efficacy beliefs to change as the context in which the behavior

or task is to be carried out changes (e.g., Alliger & Williams, 1993; Bandura, 1997; Bandura & Locke, 2003; Carver & Scheier, 1990). One of such contexts in goal achievement tasks is one's perceived goal progress, which could influence the evaluation of one's ability (i.e., self-efficacy regarding performing the required behavior) and the evaluation of the discrepancy between the current status and the goal (i.e., the opposite of outcome self-efficacy). For example, Bandura (1986) suggested that when individuals perceive lack of goal progress, they are more likely to judge themselves as lower in their ability to perform the task as well as to meet their goals (Bandura, 1986). On the contrary, when individuals perceive satisfactory progress toward a goal, they are likely to experience increased confidence in performing the task and a reduced discrepancy between the current status and the goal (i.e., higher confidence in attaining the goal). Consistent with this argument, using an experience sampling method, Alliger and Williams (1993) found that at a given moment, employees' perceived progress on work activities was positively related to their perceived skill level (i.e., self-efficacy regarding performing the current work activities). Similarly, in the educational setting, Schunk (1996) also suggested that perceived progress promotes skill acquisition by sustaining students' self-efficacy. In the context of job search, this view suggests that individuals' perceived progress in their job search may have a positive impact on self-efficacy regarding performing job search behaviors and self-efficacy regarding obtaining employment. Supporting this idea, Wanberg et al. (2010) have shown that on days when unemployed job seekers perceive less progress in their job search, they also experience lower levels of

reemployment efficacy. Given these empirical evidences, I hypothesize the following dynamic relationships:

Hypothesis 1: At the within-person level, perceived job search progress is positively related to job search self-efficacy regarding performing job search behaviors.

Hypothesis 2: At the within-person level, perceived job search progress is positively related to job search self-efficacy regarding obtaining employment.

Self-Efficacy and Job Search Behaviors

Current research offers multiple perspectives on how efficacy beliefs may impact goal-related effort. Social cognitive theory (e.g., Bandura, 1986; 1997) suggests that perceived progress could have a positive effect on subsequent performance through creating positive efficacy beliefs, while experiencing negative reactions toward goal progress induces low self-efficacy, which can be de-motivating and interfere with the continuity of action. Based on this premise, in the current study, I expect that job search behavior self-efficacy is positively related to persistency in job search behaviors.

Two mechanisms for this positive relationship have been suggested in previous literature. On the one hand, higher levels of behavior self-efficacy leads to lower anticipated resource needs and higher anticipated gain (Vancouver & Kendall, 2006) in the job search process. Therefore, from a cost-benefit analysis perspective (e.g., Morrison & Vancouver, 2000), job search behavior is a more attractive choice (i.e., lower effort but higher return) when job seekers perceive high job search behavior self-efficacy. On the other hand, people tend to behave in a way that

maintains their current positive affective states or changes their current negative affective states (Seo, Barrett, & Bartunek, 2004). Thus, when there are doubts about the ability to perform certain actions (e.g., lower levels of job search behavior self-efficacy), attention disengages from the task, allowing one to protect the self from more severe disappointment and negative feedback associated with unexpected failure (Kluger & DeNisi, 1996). In contrast, when self-efficacy regarding performing the task (e.g., obtaining employment information online and participating in an interview) is high, individuals are more likely to engage in the task (e.g., job search) as a positive mood-maintenance strategy. Supporting these arguments, Kanfer et al. (2001) reported that job seekers with higher levels of job search self-efficacy searched jobs more intensively. This positive relationship was also supported by a within-person study, in which Wanberg et al. (2005) found that when job seekers perceived higher rather than lower job search behavior self-efficacy, they were more likely to search the job intensively in the following two weeks. Thus, I propose:

Hypothesis 3: At the within-person level, job search behavior self-efficacy is positively related to preparatory job search behaviors.

Hypothesis 4: At the within-person level, job search behavior self-efficacy is positively related to active job search behaviors.

On the other hand, higher levels of self-efficacy regarding obtaining employment may decrease one's effort level. Specifically, the control theory perspective (e.g., Carver & Scheier, 1990; Vancouver et al., 2001) has suggested that people strive to maintain a desire state (i.e., goal) of a certain variable (employment in the current case). Lower levels of perceived progress signals a highlighted

discrepancy between desired and actual status in goal pursuit and that this discrepancy results in effort directing at reducing this discrepancy, thus to keep the state of the variable at the desired level. Conversely, higher levels of perceived progress signals that progress is on target or ahead of target, thus the lack of discrepancy (or negative discrepancy) may lead to decreased effort.

According to the control theory framework, job search behavior is motivated by discrepancy reduction. To the extent that job seekers see themselves as far away from the desirable employment goal (i.e., lower levels of self-efficacy regarding obtaining employment), job search behavior represents an individual's response aimed at reducing such discrepancies (e.g., Latack et al., 1995). Thus, employment self-efficacy, as a subjective assessment that reflects the discrepancy between the current status and the employment goal, is expected to be negatively related to subsequent effort on job search. When individuals feel confident about obtaining employment (or close to achieving the employment goal), the perceived discrepancy between status quo and desirable end state (employment) is small, which can reduce motivation and persistence for tasks leading to discrepancy reduction (i.e., job search). Recent studies on dual-goal self-regulation process suggest that when individuals are equally committed to two goals, they allocate time to whichever goal was further from completion (Schmidt & DeShon, 2007). Considering that completing school work is also an important goal for college seniors, it is expected that they spend more time on school work rather than on job searching when they perceive higher levels of job search progress. In sum, I propose:

Hypothesis 5: At the within-person level, employment self-efficacy is negatively associated with preparatory job search behavior.

Hypothesis 6: At the within-person level, employment self-efficacy is negatively associated with active job search behavior.

Job Search Behaviors and Outcome

In the current study, we used number of job offers as the outcome of job search behaviors. Previous studies have suggested that preparatory and active job search behavior are proximal antecedents to employment outcomes (Kanfer et al., 2001) and that the frequency of job search behavior should translate into an increase in the number of job offers received by an individual (Saks & Ashforth, 2000; Côté, et al., 2006). Specifically, when job seekers are more actively engaged in preparatory job search behaviors, such as carefully reading job ads in newspapers and writing application letters, they are more likely to identify suitable job opportunities that match their abilities and needs. This increased fit between the person the position may lead to higher probability of receiving a job offer. Similarly, when job seekers spend more time making telephone inquiries to prospective employers and building relationships with potential employers, they are more likely to reach a larger numbers of potential employers and make good impressions on the recruiters, which could lead to a higher number of job offers. On the contrary, when job seekers perform job search less frequently, perhaps due to school work or personal health issues, they are less likely to receive job interviews and job offers in the subsequent episode. Finally, I argue that receiving job offers is positively related to job seekers' perceptions of making progress. Although receiving more job offers is not the ultimate goal of job

search behaviors, it is an objective criterion based on which judgment regarding the proximity of the employment goal. For example, previous studies have shown that number of job offers received is a proximal outcome of job search behaviors, and an important criterion for successful job search (Brasher & Chen, 1999; Saks, 2006), especially for college graduates (e.g., Brown et al., 2006; Ellis & Taylor, 1983; Saks & Ashforth, 2000). In addition, because of more options to choose from, people who receive more job offers are also likely to have higher salary and enjoy higher person-job fit after employment. To summarize, I propose the following:

Hypothesis 7: At the within-person level, preparatory job search behavior is positively related to number of job offers received.

Hypothesis 8: At the within-person level, active job search behavior is positively related to number of job offers received.

Hypothesis 9: At the within-person level, number of job offers received is positively related to perceived job search progress.

Goal Orientation

Goal orientation refers to people's goal preferences in achievement situations (Payne, Youngcourt, & Beaubien, 2007). Two classes of goal orientations are usually distinguished: (a) learning goal orientation (LGO), characterized by a focus on increasing competence and mastering something new, and (b) performance goal orientation (PGO), characterized by a focus on increasing competence and thereby gaining positive judgments and avoiding negative judgments about one's competency (Dweck, 1986). In addition, the two goal orientations differ in terms of the standard used for evaluating and defining performance (Elliot & McGregor, 2001). Whereas

individuals with a strong LGO evaluate their competence according to whether they have mastered the task or developed their skills (i.e., an absolute or intrapersonal standard), individuals with a strong PGO evaluate their competence according to how they performed compared to others (i.e., a normative standard). Furthermore, individuals with higher levels of LGO tend to hold an incremental (malleable) theory of one's ability, while individuals with higher levels of PGO tend to hold an entity (fixed) theory of one's ability.

Individuals who are focused on learning goals tend to view challenging situation as an opportunity to advance their abilities. Thus, they are more likely to choose difficult and challenging tasks to develop their competencies (Elliott & Dweck, 1988). In addition, individuals with higher levels of LGO tend to interpret outcomes as diagnostic of their effort (Dweck & Leggett, 1988). When performance is poor or when facing failure, individuals with strong LGO interpret this as useful feedback on their effort level, rather than simply reflecting their lack of competencies. Because of their incremental view of competence, poor performance and failure does not lead to lowered self-confidence. Instead, unsatisfactory progress could lead to increased efforts to analyze and change strategies (e.g., Schunk, 1996).

Previous between-person studies have supported the role of LGO in protecting self-efficacy from aversive environments. In particular, LGO is associated with persistence (rather than withdrawal) in the face of obstacles or failures. For example, Li and Bagger (2008) found that LGO moderates the relationship between role ambiguity and self-efficacy, such that the relationship between role ambiguity and self-efficacy was weaker among individuals with higher levels of LGO. In addition,

Whinghter, Cunningham, Wang, and Burnfield (2008) found that the positive effect of workload on frustration was weaker for people with high levels of LGO than for those with low levels of LGO. Further, Wang and Takeuchi (2007) suggest that LGO may smooth difficult adjustment situations. Among a sample of expatriates, the authors found that LGO was positively related to work adjustment, interaction adjustment, general adjustment, job performance, and negatively related to premature return intention.

Because job seeking is a complex task, during which obstacles, failures, and setbacks are common, and because job seekers almost inevitably have to deal with rejections from potential employers, job seekers with higher levels of LGO would be protected against losing self-efficacy due to negative feedbacks. Therefore, I propose:

Hypothesis 10: Learning goal orientation moderates the within-person relationship between perceived job search progress and job search self-efficacy, such that for individuals with higher (vs. lower) levels of learning goal orientation, the relationship between perceived job search progress and job search self-efficacy is weaker (vs. stronger).

Hypothesis 11: Learning goal orientation moderates the within-person relationship between perceived job search progress and employment self-efficacy, such that for individuals with higher (vs. lower) learning goal orientation, the relationship between perceived job search progress and employment self-efficacy is weaker (vs. stronger).

Individuals who have higher levels of PGO may be particularly averse to appearing incompetent (VandeWalle, 1997). They tend to use previous performance

to validate their views about their own competence and interpret desirable/undesirable outcomes as indicative of their ability/lack of ability. Because of their entity view of competence, poor performance and failure are regarded as predictive of incompetence and future failures (VandeWalle et al., 2001). These negative responses, or learned helplessness, may hinder their ability to develop effective strategies to cope with negative feedback, which could reinforce their tendency to attribute it to lack of abilities; ultimately leading to refraining from further effort and to withdrawal (Dweck, 1986).

Previous studies have provided support for this view using between-person designs. For example, Whinghter et al. (2008) found that PGO moderates the effect of quantitative workload on frustration. For people with higher levels of PGO, there is a positive relationship between quantitative workload and frustration. For people with lower levels of PGO, the relationship between quantitative workload and frustration is negative. Furthermore, persistence on the task is less likely for people with higher levels of PGO because performance goals may undermine intrinsic motivation and interest (Elliot & Harackiewicz, 1996). Consistent with this argument, job seekers with high levels of PGO are likely to respond more negatively to unsatisfactory progress. In other words, their confidence in their own ability and the probability of employment may suffer more from lack of progress. Thus, I propose:

Hypothesis 12: Performance goal orientation moderates the within-person relationship between perceived job search progress and job search self-efficacy, such that the positive relationship is stronger (vs. weaker) among job seekers with higher (vs. lower) levels of performance goal orientation.

Hypothesis 13: Performance goal orientation moderates the within-person relationship between perceived job search progress and employment self-efficacy, such that the positive relationship is stronger (vs. weaker) among job seekers with higher (vs. lower) levels of performance goal orientation.

Attribution

The effects of previous performance on efficacy beliefs may not only depend on personality traits, but also depend on the cognitive appraisal of that performance (Bandura, 1986). Research on attribution theory has demonstrated that causal explanations for performance are critical determinants of individuals' subsequent perceptions of their performance capabilities (Gist & Mitchell, 1992) and motivation following success and failure (Weiner, 1986). Weiner (1985) emphasized locus of causality attributions in achievement-related activities as triggering "the most fundamental causal distinction." (p. 551). Internal locus of causality attribution credits the performance to the actor, whereas external locus of causality attribution credits the performance to situation or luck. In addition, locus of attribution influences future expectations of success. Individuals who attribute goal failure to internal and stable causes (e.g., ability) are likely to believe that goal failure will occur again in the future, which leads to lower confidence in goal attainment. On the other hand, individuals who attribute goal failure to external and unstable factors (e.g., luck) may believe that goal attainment is eventually possible despite the temporary setback.

Social cognitive theory (Bandura, 1997) further suggests that successful performance that is attributable to internal reasons (e.g., personal ability and effort)

lead to increases in self-efficacy. In contrast, goal progress attributed to external factors (e.g., task difficulty and luck) should have limited implications for one's prospects for future success, as the success is seen as not reflecting capabilities. On the contrary, failure attributed to one's own doing can cast doubt on future accomplishments, as it may imply that one lacks the skills necessary for success, resulting in decreased self-efficacy (Ilgen & Davis, 2000). Further, failure attributed to external factors may allow one to maintain positive perceptions of his or her capabilities, as it renders the failure non-diagnostic with regard to one's capabilities (Bandura, 1997).

Several previous studies have provided empirical support to these propositions. Specifically, Silver, Mitchell, and Gist's (1995) lab experiments found that internal attributions for successful past performance were positively related to post-task self-efficacy, while those who made internal attributions for unsuccessful past performance exhibited lower post-task self-efficacy. In another study, Tolli and Schmidt (2008) manipulated participants' perceived goal progress via performance feedback. Their results showed that attributing positive feedback to internally controlled factors may lead to increases in self-efficacy and subsequent goal level, whereas attributing negative feedback to internally controlled factors may lead to decreases in self-efficacy and subsequent goal level. In the field setting, Tay et al. (2006) showed that locus of causality attribution moderates the relationship between interview success and subsequent interview self-efficacy, such that internal attributions strengthen the positive link between interview success and subsequent interview self-efficacy.

Based on these findings, I propose that causal attribution moderates the relationship between perceived job search progress and subsequent efficacy beliefs, such that internal attributions further strengthen the positive link between perceived goal progress and subsequent self-efficacy and outcome efficacy. When job seekers make satisfactory progress in previous job search and attribute this success to their own ability, effort, and connections (i.e., internal), the perceived progress–efficacy beliefs relationship should be strengthened because internal attributions for success (e.g., receiving interview opportunities or job offers) convey positive information about job seekers' capabilities and prospects on the job market. Similarly, if applicants are not successful (i.e., fail to obtain interview opportunities or job offers) and make internal attributions (e.g., incompetent, inability to maintain effort, and lack of necessary connections), this too should strengthen the link between perceived job search progress and subsequent job search self-efficacy and employment self-efficacy. Based on this reasoning, I propose:

Hypothesis 14: Internal attribution moderates the relationship between perceived job search progress and job search self-efficacy, such that the positive relationship is stronger (vs. weaker) when job seekers make internal (vs. external) attributions.

Hypothesis 15: Internal attribution moderates the relationship between perceived job search progress and employment self-efficacy, such that the positive relationship is stronger (vs. weaker) when job seekers make internal (vs. external) attributions.

METHODS

Participants

A sample of 133 college students who were in their senior year and were actively searching for jobs was recruited from four universities in China (N = 12, 39, 40, and 42 respectively). The announcement of the study was posted on the online bulletin board system of each university's placement center. In the announcement, only students who were actively searching for jobs were invited to participate in the study. Participants were also informed that (1) their information is strictly confidential; (2) the participation of the study is voluntary, and (3) they would be given a free career interest test and counseling as a token of appreciation for participating in this study. Participants were instructed to contact the researcher directly if they were interested in participating. Of these 133 participants, 77 (57.9%) were female. The mean age of the sample was 23.5 (*SD* = 1.79). Participants' mean GPA was 3.06 (*SD* = .35).

Data collection included two different phases. In the first phase, participants completed paper-pencil questionnaire of demographic information and goal orientation measures. This questionnaire was administered in the second week of October, 2009. This time was chosen by the university placement centers because typically Chinese college seniors start to look for jobs at that time and companies also begin their on-campus recruiting at that time. Two weeks after the first phase, participants were interviewed in 12 half-weekly telephone surveys over the next six weeks, which assessed perceived job search progress, job search behavior self-efficacy, employment self-efficacy, preparatory job search behaviors, active job search behaviors, and number of job offers received. Each Wednesday evening and

Sunday evening from 6:00 p.m. to 9:00 p.m., trained research assistants called the participants to assess their job search experience in the previous half week. Semi-weekly assessments were chosen for the repeated assessments because job search behaviors and job offers are low base rate events, especially for college seniors. Thus, measuring job search behaviors and offers received more frequently (e.g., daily, Wanberg et al., 2010) may be unnecessary. On the flip side, less frequent assessment (e.g., once every two weeks, Wanberg et al., 2005) could result in increased retrieval bias. In the current study, if participants did not record their data during this assessment window, they could not make up that phone survey in the following assessment windows. Further, the student job seekers were tracked for six weeks based on previous data from the university placement centers. According to their placement record, most student job seekers are very active from late October to early December, which makes it easier to observe job search behaviors during this period. In addition, students typically started to accept job offers in early December, roughly six weeks since the first phone interview, thus would become ineligible for the study.

Both the paper-and-pencil questionnaire used in initial assessment and the follow-up phone interview were conducted in Chinese. The translation-back translation procedure was followed to translate the English-based measures into Chinese (Brislin, 1980).

Because data from two consecutive measurements constitute a complete observation (perceived goal progress, internal attribution, and self-efficacy at time T, and job search behaviors and outcome at time T+1), the maximum number of observations per participant was 11. Because participants would become ineligible for

the study after they found a job, on average they completed 7.9 within-person observations.[2] On average, there was less than one occasion per person (.76) for failing to answer the telephone survey during the whole daily phone-survey period, which resulted in a compliance rate of 91.2%. The typical compliance rate of a multi-wave within-person field study is 70-80% (e.g., Liu, Wang, Zhan, & Shi, 2009; Wang, Liu, Zhan, & Shi, 2010); thus, the compliance rate in the current study is higher than most of previous studies.

Initial Assessment

Demographics

Respondents reported their age, gender, GPA, and the school they are from. These variables were used as between-person control variables in later analyses.

Goal orientation

The two dimensions of goal orientation (i.e., learning goal orientation and performance goal orientation) were assessed with three items adapted from Elliot and McGregor (2001); items were altered to fit to job search scenarios. Respondents rated the extent to which each statement was characteristic of them, from 1 = *not true of me at all* to 5 = *completely true of me*. A sample item for learning goal orientation is "I want to learn as much as possible from my job search experience." The alpha reliability of learning goal orientation in this sample was .84. A sample item for performance goal orientation is "I just want to avoid doing poorly in my job search." The alpha reliability of performance goal orientation in this sample was .76.

Phone Surveys

Perceived job search progress

The six-item scale to assess job search progress was from Wanberg et al. (2010). Individuals were asked to respond, on scales ranging from 1 = *strongly disagree* to 5 = *strongly agree*, to six statements about their perceived progress in their job search. A sample item is "From Monday to Wednesday/ from Thursday to Sunday, I made good progress on my job search." Across 12 measurement occasions, the mean alpha for perceived job search progress was .78 (range = .72-.86, *SD* = .05).

Internal attribution

Three items were used to assess internal attribution to job search progress. Individuals were asked to indicate whether their job search progress was due to the following reasons: their own effort, their own ability, and their own social connections. Participants' response ranged from 1 = *strongly disagree* to 5 = *strongly agree*. Higher (vs. lower) scores on these three items mean higher (vs. lower) internal attribution. Across 12 measurement occasions, the mean alpha for internal attribution was .67 (range = .64-.71, *SD* = .03).

Job search behavior self-efficacy

The three-item scale to assess job search behavior self-efficacy was adapted from Judge, Locke, Durham, and Kluger (1998). Individuals were asked to respond, on scales ranging from 1 = *strongly disagree* to 5 = *strongly agree*, to five statements about their confidence in performing job search tasks. A sample item is "When I make plans about my job search actions, I am certain I can make them work." Across 12 measurement occasions, the mean alpha for job search behavior self-efficacy was .70 (range = .62-.80, *SD* = .05).

Employment self-efficacy

I adapted three items from Wanberg et al. (2010) to assess employment self-efficacy. Individuals were asked to respond, on scales ranging from 1 = *strongly disagree* to 5 = *strongly agree*, to three statements about their confidence in being employed. A sample item is "I am confident in landing a job." Across 12 measurement occasions, the mean alpha for employment self-efficacy was .84 (range = .77-.91, *SD* = .05).

Job search behaviors

To be more comprehensive in assessing the content of job search behaviors, I used 10 items from Blau (1994) and 6 items from Wanberg et al. (2000) to assess job search behaviors. Individuals were asked to respond, on scales ranging from 1 = *not at all* to 5 = *I do it every day*, to job-search behavioral items. Exploratory factor analysis results suggested that a 2-factor model best explain the intercorrelations among job search behavior items ($\chi^2(89) = 1011.41$, $p < .05$). The factor loadings were shown in Appendix A. This two factor structure is largely consistent with Blau's two-dimension model of job search behaviors. Specifically, 7 items loaded significantly on the factor "preparatory job search behaviors", with a representative item "Used the internet or other computer services to locate job openings." 9 items loaded significantly on the factor "active job search behaviors" with a representative item "Telephoned a prospective employer." Across 12 measurement occasions, the mean alpha for preparatory job search behaviors and active job search behaviors were .78 (range =.73-84, *SD* = .04) and .89 (range = .85-.92, *SD* = .02) respectively.

Job offer

A single item was used to assess the number of job offers individuals receive. "From Monday to Wednesday/From Thursday to Sunday, how many job offers did you receive?"

All the scales and items in initial assessment and phone surveys were presented in Appendix B.

Analytical Strategy

Because in the proposed model, perceived job search progress, internal attribution, and job search self-efficacy were measured at time T and job search behaviors and number of job offers were measured at time T+1, the first step in the data analysis is to match time T predictors with time T+1 outcomes to form a complete observation. In addition, the data in this study contains a hierarchical structure in which 12 phone interviews are nested within each person. Multilevel modeling techniques (Bryk & Raudenbush, 1992) have been developed to analyze this type of nested data and are used to test the specific hypotheses in this study. I use Mplus 5.2 (Muthén & Muthén, 2008) for its flexibility in modeling non-normally distributed outcomes in multilevel models. Specifically, in this study, the number of job offers is a count variable. The distribution of this variable contains large amount of zeros, typically following a Poisson distribution and consequently violating assumptions of linear regression model (Gardner, Mulvey, & Shaw, 1995). Therefore, I conducted nonlinear multilevel regression analyses for number of job offers by using a Poisson sampling model with a log-link function (Bryk & Raudenbush, 1992). I also centered all within-person predictors (i.e., perceived job search progress and internal attribution) by individual mean (i.e., group mean) to warrant the accurate

interpretation of the statistical estimates in the multilevel modeling (Raudenbush & Bryk, 2002). All between-person predictors (i.e., demographic control variables and goal orientation variables) were centered on the grand mean of the respective variables.

RESULTS

Preliminary Analysis

Table 1 portrays the means, standard deviations, and between-person correlations among all study variables. Within-person correlations among repeated measures are also presented. Over the 11 half-weekly measurement occasions, student job seekers obtained .43 job offers per half-week (*SD* = .82). The distribution of this variable was highly skewed (the counts ranged from 0 to 6, with 69.8% of the scores = 0).

Before testing the hypotheses, I examined whether systematic within- and between-individual variance existed in the repeated-measures variables via a series of intercept-only models. Specifically, for perceived job search progress, 65 percent of the total variance was within persons (ICC_1 = .35); for internal attribution, 74 percent of the total variance was within persons (ICC_1 = .26); for job search behavior self-efficacy, 59 percent of the total variance was within persons (ICC_1 = .41); for employment self-efficacy, 53 percent of the total variance was within persons (ICC_1 = .47); for preparatory job search behaviors, 53 percent of the total variance was within persons (ICC_1 = .47). These analyses demonstrated sufficient within- and between-individual variances in the measures over time, and supported both conducting repeated measures and using hierarchical linear modeling on these data.

Test of Hypotheses

To test the within-person relationships specified by the model, I first estimated a multilevel model (M_1) with within-person main effects and interaction effects (i.e., hypothesized model in Figure 1 without the cross-level moderation effects).[3] Model estimation results showed that most of the relationships in the hypothesized model were significant. Multilevel regression coefficients were presented in Table 2.

Specifically, perceived job search progress was positively related to job search behavior self-efficacy ($\gamma_{10} = .23$, $p < .01$) and employment efficacy ($\gamma_{50} = .15$, $p < .01$). These results suggested that when job seekers perceived higher levels of progress in their job search they might perceive higher levels of self-efficacy regarding performance job search behaviors and higher levels of self-efficacy regarding obtaining employment. 15% of the within-person variance of job search behavior self-efficacy was explained by perceived job search progress. And 8% of the within-person variance of employment self-efficacy was explained by perceived job search progress. Therefore, Hypotheses 1 and 2 were both supported.

Job search behavior self-efficacy was hypothesized to be positively related to preparatory job search behavior and active job search behavior. As shown in Table 2, job search behavior self-efficacy was positively related to active job search behavior ($\gamma_{121} = .15$, $p < .01$). When job seekers had higher self-efficacy regarding performing job search behaviors, they might engage in active job search behaviors more frequently. Thus, Hypothesis 4 was supported. However, job search behavior self-efficacy was only marginally related to preparatory job search behavior ($\gamma_{91} = .07$, $.05 < p < .10$). Thus, Hypothesis 3 was not supported.

Employment self-efficacy was hypothesized to be negatively related to preparatory job search behavior and active job search behavior. As shown in Table 2, employment self-efficacy was negatively related to both preparatory job search behavior (γ_{101} = -.10, p < .01) and active job search behavior (γ_{131} = -.08, p < .01). When job seekers had higher self-efficacy regarding obtaining employment, they were more likely to engage in both types of job search behaviors less frequently. Therefore, Hypotheses 5 and 6 were both supported. Job search behavior self-efficacy and employment self-efficacy as a set explained 11% of the within-person variance in preparatory job search behavior, and 4% of the within-person variance in active job search behavior.

Consistent with the prediction of Hypothesis 8, active job search behavior was positively related to number of job offers received (γ_{161} = .34, p < .01). Specifically, when active job search behaviors increased by one unit, the number of job offers received increased by 1.40 times. To contrast, Hypothesis 7 was not supported; preparatory job search behavior was not significantly related to number of job offers received (γ_{151} = .13, p > .05).

Consistent with the prediction of Hypothesis 9, perceived job search progress was significantly related to number of job offers received (γ_{181} = .21, p < .01). Specifically, when job seekers receive more job offers, they also perceived more progress in their job search. Number of job offers received explained 6% of the within-person variance in perceived job search progress.[4]

Finally, the cross-product of perceived job search progress and internal attribution was significantly related to both job search behavior self-efficacy (γ_{31} =

.15, $p < .01$) and employment self-efficacy ($\gamma_{71} = .21$, $p < .01$). The interaction term of perceived job search progress and internal attribution explained an additional 1% of the variance in job search behavior self-efficacy and 2% of the variance in employment self-efficacy. As shown in Figure 3 and 4, when job seekers made internal attributions about their progress, the relationship between perceived job search progress and job search behavior self-efficacy and the relationship between perceived job search progress and employment self-efficacy were both stronger. Thus, Hypotheses 14 and 15 were supported. Furthermore, although not hypothesized in my model, I also found that internal attribution was significantly related to both job search behavior self-efficacy ($\gamma_{21} = .09$, $p < .01$) and employment self-efficacy ($\gamma_{61} = .11$, $p < .01$). In other words, when job seekers made higher levels of internal attribution regarding their job search progress, they were more likely to experience higher levels of self-efficacy regarding performing job search behaviors and higher levels of self-efficacy regarding obtaining employment.

To test the cross-level moderation effects, I then estimated a multilevel model (M_2) with between-person moderation effects (the hypothesized model in Figure 1). The results are presented in Table 4. Specifically, Hypotheses 10 and 11 suggest that higher levels of learning goal orientation attenuates the positive within-person relationship between perceived job search progress and job search behavior self-efficacy and the positive within-person relationship between perceived job search progress and employment self-efficacy. In the current results, neither Hypothesis 10 nor Hypothesis 11 was supported. Learning goal orientation did not predict the random slope between perceived job search progress and job search behavior self-

efficacy (γ_{11} = .02, p > .05) or the random slope between perceived job search progress and employment self-efficacy (γ_{51} = .02, p > .05).

Hypotheses 12 and 13 suggested that higher levels of performance goal orientation strengthens the positive within-person relationship between perceived job search progress and job search self-efficacy and the positive within-person relationship between perceived job search progress and employment self-efficacy. In the current results, both hypotheses were supported. Specifically, performance goal orientation predicted the random slope between perceived job search progress and job search behavior self-efficacy (γ_{12} = .04, p < .05). As shown in Figure 5, the higher job seekers' performance goal orientation, the stronger the within-person relationship was between perceived job search progress and job search behavior self-efficacy. In addition, performance goal orientation predicted the random slope between perceived job search progress and employment self-efficacy (γ_{52} = .07, p < .05). As shown in Figure 6, the higher job seekers' performance goal orientation, the stronger the within-person relationship was between perceived job search progress and employment self-efficacy.

To estimate how much slope variance is explained by the within-person level and cross-level interaction terms, I also calculated pseudo-R^2 change from the main effects only model (M_0; M_1 without the interaction effects between perceived job search progress and internal attribution) to the full model (M_2). Comparing the residual variances of the full model with the intra-individual main effect model, I found that PGO explained 10% of the variance in the relationship between perceived job search progress and job search behavior self-efficacy, and 40% of the variance in

the relationship between perceived job search progress and employment self-efficacy[5].

Supplemental Analysis

Because conceptually preparatory job search behaviors (e.g., identify a job lead online) usually proceed active job search behaviors (telephone a potential employer), I tested the hypothesis that preparatory job search behavior leads to active job search behavior. Specifically, controlling for the effects of job search behavior self-efficacy and employment self-efficacy, preparatory job search behavior was significantly related to active job search behavior ($\gamma = .24$, $p < .01$). The more frequent job seekers engage in preparatory job search behaviors, the more frequent they engage in active job search behaviors.

To test whether job search self-efficacy interacts with employment self-efficacy in predicting two types of job search behaviors, I also included the product term of job search behavior self-efficacy and employment self-efficacy in the multilevel models. The results showed that the interaction did not predict preparatory job search behavior ($\gamma = .01$, $p > .10$) or active job search behavior ($\gamma = .01$, $p > .10$).

I also conducted supplemental analyses linking number of job offers (at Time T) to perceived job search progress (at Time T) and two types of efficacy beliefs (at Time T). Although both the relationship between number of job offers and perceived job search progress ($\gamma = .29$, $p < .01$) and the relationship between perceived job search progress and job search behavior self-efficacy ($\gamma = .22$, $p < .01$) were statistically significant, the indirect effect of number of job offers on job search behavior self-efficacy through perceived job search progress was not significant

(indirect effect = .06, $p > .05$). Similarly, although perceived job search progress was significantly related to employment self-efficacy ($\gamma = .16$, $p < .01$), the indirect effect of number of job offers on employment self-efficacy through perceived job search progress was not significant (indirect effect = .07, $p > .05$). Given these results, I did not conduct further analysis linking number of job offers to further outcome variables, such as job search behaviors and number of job offers in the following half-week.

Finally, I tested the whether goal orientation influence job seekers' job search behaviors and attribution. Results showed that learning goal orientation and performance goal orientation did not significantly related to the between-person intercepts of job search behavior self-efficacy, employment self-efficacy, preparatory job search behavior, active job search behavior, number of job offers, or perceived job search progress ($|\gamma| < .09$, ps > .10).

DISCUSSION

Understanding the process via which individuals exert effort to identify job opportunities is crucial to both the individuals seeking employment and the organizations that ultimately hire these individuals (Barber et al., 1994). More importantly, job search is a prototypical example of dynamic self-regulation in a realistic field setting (vs. a highly controlled, low fidelity lab task). Thus, the motivational processes underlying job search are critically informative for theory building in the self-regulation literature. In the current study, I examined a multilevel model linking perceived job search progress, self-efficacy beliefs, job search behaviors, and number of job offers. Consistent with the hypothesis, I found that at the within-person level of analysis perceived job search progress was positively

related to both self-efficacy regarding performing job search behaviors and self-efficacy regarding obtaining employment. Further, the relationship between perceived job search progress and job search self-efficacy and the relationship between perceived job search progress and employment self-efficacy were stronger when job seekers make internal (vs. external) attribution about their progress. In addition, these within-person relationships were stronger for job seekers with higher levels of performance goal orientation. In addition, job search behavior self-efficacy was positively related to active job search behavior, whereas employment self-efficacy was negatively related to both preparatory job search behavior and active job search behavior. Furthermore, active job search behavior was positively related to the number of job offers received by the job seeker.

Contrary to my expectation, learning goal orientation was not significantly related to the random slopes between perceived job search progress and self-efficacy beliefs. One explanation is that following setbacks LGO protests people's ego or self-esteem (Cron, Slocum, VandeWalle, & Fu, 2005) but not necessarily domain-specific self-efficacy (i.e., self-efficacy regarding performing certain tasks). When experiencing failure, people with higher levels of LGO still recognize the weakness of their ability in completing the task as well as a relatively low likelihood to achieve the goal; however, they are more likely to maintain their self-esteem because the failure is considered as temporary and used as valuable feedback to improve personal competency (Button, Mathieu, & Zajac, 1996). Moreover, job search behavior self-efficacy was only marginally related to preparatory job search behavior. It is possible that active job search behaviors such as contacting a potential employer or asking

friends for job leads are energy dependent and resource consuming, thus they are more likely to be sustained by higher levels of job search behavior self-efficacy. While on the other hand, people can engage in preparatory job search behaviors easily, such as search for a job lead online with or without high levels of confidence in doing so. Lastly, I found that only active job search behavior was significantly related to number of job offers received. The reason for this may be that preparatory job search behaviors' benefits only manifest in longer terms (Barber et al., 1994). Specifically, it may take quite a while for behaviors such as finding a job lead or preparing a good resume to translate into actual job offers. Because in the current analysis, preparatory job search behavior and job offers were measured at the same time, it is unlikely for me to find a significant association. Future studies could use longer intervals between the measurement of preparatory job search behavior and job offers to better test the potential benefits of preparatory job search behaviors.

To examine whether outcome self-efficacy interacts with behavior self-efficacy in influencing people's job search behavior, in supplementary analysis I tested the product term of job search behavior self-efficacy and employment self-efficacy as a predictor of two types of job search behaviors. The results showed the interaction term did not predict either preparatory job search behavior or active job search behavior. I also tested the curvilinear relationship between efficacy beliefs (both job search behavior self-efficacy and employment self-efficacy) and job search behaviors by including the quadratic terms of these two types of efficacy beliefs as predictors of both types of job search behaviors. Neither quadratic term was significant in predicting either preparatory or active job search behaviors.

Theoretically, however, extremely high levels of outcome self-efficacy (e.g., a table tennis player clinched the first place in the group before the last game, thus has really high levels of outcome self-efficacy to advance to the next stage) or extremely low levels of outcome self-efficacy (e.g., due to bad performance in the midterm exam, a student will not pass the class even if he/she gets a perfect score in the final, thus has really lower outcome self-efficacy in term of passing the class) may override the effects of behavior self-efficacy (e.g., can I beat the last opponent or can I score high for the final exam). In the case of having extremely high levels of outcome self-efficacy, a tennis player may lack the motivation to play hard because the outcome is determined without uncertainty. Thus, his/her effort will have little effect on the final outcome (i.e., advance to the next stage). However, job search involves large amount of uncertainty. Before a final decision is made, the outcome could still change because of job seekers' actions. For example, a job seeker may already receive one good job offer, thus experience high levels of employment self-efficacy. However, he or she could still improve the employment outcome by keeping engaging in job search, and possibly receiving competing job offers. Thus, higher levels of employment self-efficacy could decrease job search behavior, but not eliminate job search behavior or override the effect of job search behavior self-efficacy. In the case of extremely low levels of outcome self-efficacy mentioned earlier, the student gives up putting in more effort because the goal to pass the class is abandoned. However, the goal to be employed is rarely abandoned entirely. Job search is such a high-stake task that goal abandonment is almost not an option. Thus, even when employment self-efficacy is really low, student job seekers are still likely to exert efforts on job

search because commitment to the goal still exists. Future studies could test the potential curvilinear relationship between outcome self-efficacy and job search behaviors and the interactive effect of behavior self-efficacy and outcome self-efficacy using other realistic research scenarios, when there is less certainty in the outcome or when abandoning the goal is a viable option.

In the following paragraphs, I discuss the theoretical as well as practical implications of the current study.

Theoretical Implications

The nature of perceived goal progress

The current study contributes to the understanding of the perceived goal progress construct. Perceived goal progress could be viewed as a type of self-generated feedback (i.e., task perception (*p*) in the control theory perspective; Vancouver et al., 2010), in which people assess their advancement on the task. Previous research has generally focused on the affective outcomes of perceived goal progress and produced relatively consistent research findings. Specifically, perceived goal progress is positively related to both short-term (i.e., positive affective states) and long-term psychological well-being (e.g., life satisfaction; Alliger & Williams, 1993; Williams & Alliger, 1994; Lent et al., 2005). In the context of job search, research also demonstrated that perceived job search progress was positively related to positive affect and negatively related to negative affect during job search (Wanberg et al., 2010). However, relatively less attention has been paid to the motivational consequences of perceived goal progress. The current study demonstrated that perceived job search progress could have both facilitating and hindering effects on

job seekers' motivation and subsequent effort on job search. This model helps integrate previous research which suggests that perceived goal progress could sustain effort (e.g., Alliger & Williams, 1993; Schunk, 1996) on the one hand, and hinder effort (e.g., Fishbach & Dhar, 2005; Schmidt & DeShon, 2009) on the other hand.

For example, Alliger and Williams (1993) reported that at the within-person level, perceived goal progress was positively related to task enjoyment, which is a critical component of intrinsic work motivation. Similarly, Schunk (1996) suggests that perceived goal progress in learning could produce positive self-efficacy, which leads to stronger motivation in further investing on the learning task. Taking a different perspective, Schmidt and DeShon's (2009) study suggests that perceived progress means reduced goal-performance discrepancy, which may lead to decrease in subsequent task performance. In addition, Fishbach and Dhar (2005) recognized that individuals often simultaneously pursue multiple goals. Thus, achieving the goal while preserving as much resource (cognitive and behavioral) as possible, seems to be an optimal strategy to pursue each goal. Using a lab experiment, the authors found that when individuals perceive that progress has been made and the pursuit of the focal goal is relatively satisfactory, they were more likely to switch to the pursuit of alternative goals, especially when the progress is fast. Senior year in college is a special period during which students are facing multiple difficulty goals, including finding a job (or applying graduate school) and fulfilling requirements for the undergraduate degree. At the same time, students are also very committed to both (or even more) goals. Thus, the relationship between employment self-efficacy and job search intensity is likely to be negatively due to students' commitment to the other

goals which compete for attention and resources (Schmidt & Dolis, 2009). These findings as well as the current results may suggest that the relationship between perceived goal progress and task motivation is more complicated than previously understood. In fact, both positive and negative feedback loops exist. Thus, it is important for studies to recognize the multiple implications of perceived goal progress; and more importantly, examine when and why perceived goal progress has positive versus negative impact on task motivation and effort.

Similar issues have been discussed in the feedback literature (e.g., Kluger & DeNisi, 1996; Tolli & Schmidt, 2008; Ilies & Judge, 2005), in which feedback could function as a double-edged sword. Negative feedback, for instance, could highlight the discrepancy between the current status and the goal, thus motivates job seekers to put in more effort in job search. However, previous literature also suggests that negative feedback could de-motivate individuals for different reasons. On the one hand, as predicted by the social cognitive theory (e.g., Bandura, 1997) and supported by the current study, negative feedback may lead to lower self-efficacy regarding one's ability to perform the task, thus decrease individual's motivation to perform the task in the future. On the other hand, as suggested by the Feedback Intervention Theory (Kluger & DeNisi, 1996), negative feedback might lower the self-concept of the individual, triggering the self-esteem repair mechanisms, thus detracts attention away from the task. Therefore, upon receiving negative performance feedback, individuals could experience these conflicting motivations. To contrast, upon receiving positive feedback, some individuals may choose to improve their goal, whereas others may lower their sights and "coast" (Tolli & Schmidt, 2008). For

example, Podsakoff and Farh (1989) argue that the receipt of positive feedback frequently conveys the message that performance is “on target”, which negates the necessity to increase effort. They conducted a lab study and found that subjects who receive positive feedback had little improvements in their performance and performed no better than subjects in the control group. Evidences to support the facilitating effect of positive feedback also exist. Specifically, using creativity as the outcome variable, Zhou (1998) found that positive feedback facilitates creative performance. The author reasoned that positive feedback indicated that an individual is competent and self-determining, which sustains intrinsic motivation. Ilies and Judge (2005) showed that goals were adjusted upward to create positive goal-performance discrepancy following positive feedback. Given these findings, it is conceivable that contingencies exist for the relationships between progress/feedback sign and subsequent motivation, effort, and performance, which deserve more attention among future research.

One important contingency factor is individuals’ attribution toward goal progress or feedback. For example, Tolli and Schmidt (2008) suggests that the extent to which positive feedback lead to positive goal revision depends on one’s causal attribution, such that a combination of positive feedback and internal attribution results in higher levels of self-efficacy, which leads to positive goal revision. The current study showed that internal attribution did not only strengthen the relationship between perceived job search progress and job search behavior self-efficacy but also the relationship between perceived job search progress and employment self-efficacy. It is important to note that attribution was measured as a within-person variable,

which varied significantly over time. Interestingly, in the current data, order has a marginally significant effect on internal attribution ($\gamma = -.02$, $.05 < p < .10$) such that overtime, student job seekers are more likely to make external attribution than internal attribution about their progress/lack of progress. In addition, age has a marginally significant effect on internal attribution ($\gamma = -.04$, $.05 < p < .10$) such that older (vs. younger) job seekers are more (vs. less) likely to make external attribution than internal attribution about their progress/lack of progress. Future studies should examine the antecedents of the within-person variations in attribution to better understand the interpretation of feedback information dynamically.

Multiple-goal self-regulation process

The current study also has implications for the multiple-goal self-regulation literature. Specifically, I conceptualized daily job search behavior as guided by two hierarchically structured goals: the overarching employment goal (i.e., ends or the higher-level distal goal) and the more concrete search behavior goal (i.e., means or the lower-level proximal goal). Building on this notion, the current study differentiated two types of self-efficacy according to their levels of meaning. Specifically, job search behavior self-efficacy concerns job seekers' confidence in achieving specific behavior goals and employment self-efficacy concerns job seekers' confidence in reaching the employment goal. I argued that job search behaviors are guided by these two goals simultaneously. After controlling for job search behavior self-efficacy, employment self-efficacy may generally reflect the favorability of other predictors of employment, such as job seekers' qualifications and labor market conditions. Anderson, Born, and Cunningham-Snell (2001) have suggested that labor

market conditions will influence job candidates' expectations of the chance of receiving job offers. For example, when one's qualifications fit to the job requirement and when the job market demand is high, it is likely that job seekers perceive employment goal as less difficult (i.e., having higher levels of employment self-efficacy). Consistent with the goal setting literature (Locke & Latham, 1990), this perception of less difficult employment goal could potentially lead to lower levels of effort on job search. In addition, after controlling for the effects of employment self-efficacy, job search behavior self-efficacy captures the intrinsic motivation underlying job search behaviors, such that the higher the job search behavior self-efficacy, the more motivated job seekers will be. Furthermore, the current study suggested that a "level-of-analysis" explanation (between- vs. within-person designs) as suggested by Vancouver et al. (2001) could not fully account for the inconsistency between the predictions of social cognitive theory and the control theory. Clearly defining and properly measuring self-efficacy could help reconcile these seemingly contradictory predictions.

The current account of multiple-goal self-regulation is also different from most existing studies on this topic. In the extant literature, there are three ways of studying multiple goals (usually two goals) in the same model. The first approach to studying the impact of multiple goals is to impose two parallel goals in a lab experiment. As an example, in Schmidt and DeShon (2007), student participants created class schedules for two colleges (two separate tasks) in a given period of time. Participants were expected to monitor two feedback loops simultaneously. The authors found that goal-performance discrepancies were significantly related to

subsequent time allocation. In addition, the incentives offered for goal attainment, approach-avoidance framing, and time remaining for goal pursue determined the relative influence of discrepancies for each goal. In this approach, two goals are not hierarchically structured. They are relatively unrelated, except for competing for time allocated (Louro, Pieters, & Zeelenberg, 2007).

The second approach to studying the impact of multiple goals is to measure two underlying goals that affect individuals' behavior in a natural setting. For example, both learning goals and performance goals could influence individuals' reactions to performance feedback (VandeWalle et al., 2001) and both promotion goal and prevention goal could influence individuals' decision making (e.g., Schmidt & DeShon, 2007). In the job search literature, previous studies also found that "search to leave" and "research for leverage" may be two underlying goals that affect job incumbents' job search behaviors (Boswell, Boudreau, & Dunford, 2004; Bretz, Boudreau, & Judge, 1994). In this approach, two goals are not hierarchically structured either. Although two goals are not necessarily negatively correlated, they generally do not facilitate each other either.

The third approach to studying the impact of multiple goals is to put individuals in teams, creating a multi-level structure for individuals' motivation. For example, Chen and Kanfer (2006) delineate a theoretical multilevel model of motivated behavior in teams. In their model, individual performance is hypothesized to be influenced by both team goal and individual performance goal. These two goals could be conflicting or integrated depending on the task design and the reward structure (e.g., Pearsall, Christian, & Ellis, 2010).

The current account of multiple goals is different from these traditional approaches in that one goal serve as the means of the other goal. One important implication of this type of goal structure is that when the higher level goal is satisfied, or perceived to be satisfied soon, the lower level goal (i.e., means) might be inhibited. Although previous research on multiple-goal self-regulation (e.g., DeShon & Gillespie, 2005; Schmidt & DeShon, 2007; Schmidt & Dolis, 2009) also mentioned the inhibition argument, these studies generally referred to two competing goals at the same level inhibiting each other. For example, in the study conducted by Schmidt and DeShon (2007), when participants were asked to arrange two schedules within a certain period of time, greater distance from a given goal resulted in greater time subsequently allocated to that goal, which also means less time allocated to the competing goal. However, relatively less attention has been paid to the activation or inhibition of goals when they are hierarchically structured (Fishbash & Dhar, 2005). Future research should compare and contrast the different motivational processes of these different goal structures.

Practical Implications

The current study also has several important implications in terms of helping job seekers find employment opportunities. First of all, the current study showed that active job search behavior is the proximal antecedent of job offers. In order to spend more time on job search, job seekers often need to shield themselves from distractions and better manage their time. For example, a successful employment intervention programs emphasized that job search deserves full-time concentration (Azrin & Kaplan, 1975). Specifically, providing a structured setting for daily job search

activities and helping job seekers review their search activities on a daily basis is a key component of an employment intervention program.

Second, to promote more frequent job search behaviors, university placement centers or career counselors should help improve job seekers' job search behavior self-efficacy. For example, career/employment counseling programs could teach job seekers specific job search skills, such as resume preparation skills and interview skills, and provide role models to increase their job search behavior self-efficacy (van Ryn & Vinokur, 1992). Another way to enhance/protect job search behavior self-efficacy is through intervening on the attribution processes (e.g., Della-Posta & Drummond, 2006; Jackson, Hall, Rowe, & Daniels, 2009). For example, educational programs could provide attribution training for job seekers that help them see job search failures as temporary and externally driven. This should enhance confidence in conducting job search behaviors (e.g., interviews), which on the basis of the current research should enhance job search success.

Third, job seekers need to have more realistic employment self-efficacy. Even with positive signs regarding the job search progress, career counselors should help job seekers realize that their employment goal is not fully achieved yet or there is still room for improvement. More importantly, job seekers could benefit from the mentality that there is value in setting higher-level goals (e.g., spend more time searching jobs on a daily basis or aiming at positions that better fit to the KSAs of the applicant), and these higher-level goals are achievable.

Fourth, career counselors who want to help job seekers deal with unsatisfactory progress could help job seekers realize that job search is an attainable

but difficult goal. They can lead the job seekers to focus their attention on improving their job search strategy and skills rather than worrying about their image or ruminating on the negative experiences during job search.

Job Search in China

Because the sample of the current study is from China, it is important to compare and contrast the context of job search in China vs. in United States or Europe, where most of previous job search research were conducted. In terms of the frequency of job search behaviors in China, the annual job change rate is increasing each year (Bian, 2009). Zhou (2006) estimated that young Chinese under the age of 30 average a job change at least once every five years. In other words, similar to the U.S., it is common for today's employees in China to experience multiple careers and multiple job movements during their work lives (Sullivan & Arthur, 2006). Rather than working one's way up the corporate ladder within a single organization, today's professionals in China manage their own career paths, creating what is referred to as boundary-less career, as they seize new and often different job opportunities to obtain training, enhance their human capital, and increase their marketability. In sum, the prevalence of job change and job search behavior in China is becoming more and more similar to the western world.

In terms of the specific behaviors to obtain employment, job seekers in China has traditionally relied heavily on social networks. For example, Zang (2003) suggests that network ties are an important information channel through which persons are matched to jobs in China. In particular, social contacts with high-status persons will lead to job attainment or jobs of high status for seekers because of their

positional advantage in accessing job information or influencing hiring process. Bian and his associates have done extensive research on the networking behaviors of Chinese job seekers (e.g., Bian, 1997, 2009; Bian & Huang, 2009). Drawing on Granovetter's (1995) networking theory on job search, Bian (1997) argues that weak ties are used to gather job information in a market economy. Strong ties, or guanxi networks, are used to access influence from authority in a state socialist economy where labor markets are either greatly altered or non-existent. Before the market reforms (started in early 1980s), government officials were the center of personal networks in China and were essential for job mobility since jobs were assigned bureaucratically. Thus, guanxi was important in job search mainly because the state sector monopolized unban employment before 1988. However, such factor was essentially removed after 1988. Market reforms have fundamentally changed the mechanisms of status attainment in China and the emergence of labor markets in China has led to diminishing returns of networking attempts in job search. The market reform has two important implications for job search. First, it increases job changes within, especially between, places of employment. Second, the 2003 Chinese General Social Survey (CGSS) shows a significant decline of reliance on hierarchical channels for job search. Meanwhile, market channels increased and expanded.

To better capture job search behaviors in China, in the current study I included networking items in the scale to measure job search behaviors. The result shows that student job seekers do frequently engage in networking behaviors. In addition, networking items (e.g., spoke with previous employers or business acquaintances about their knowledge of potential job leads) were generally positively related to

active job search behavior items (e.g., telephoned a prospective employer), which suggests that for Chinese job seekers networking is an integrated part of their active job search behaviors. Future studies on job search in China should take into account the similarity and differences of job search behaviors between Chinese and western job seekers.

Student vs. Unemployed Job Seekers

The current study focused on the job search behaviors of graduating college students. On the one hand, it is important to study this population whose unemployment is particularly problematic (Brown et al., 2006). Given the critical nature of one's first job, the negative ramifications associated with unemployment, and the difficulties confronted by younger workers, it seems particularly important that researchers understand the ebbs and flows of college students' job search behaviors. On the other hand, college students are largely in the career exploration phase of career development (Super, 1957). Given a lack of full-time work experience, the job search behaviors of this population may be largely exploratory and less systematic (e.g., Werbel, 2000). Thus, the generalizability of the results to older and more experienced job seekers should be made with caution (Saks, 2006). For example, Kanfer et al. (2001) found a stronger relationship between job search behaviors and employment among laid-off individuals compared to new entrants as well as employed job seekers. Thus, it is possible that the within-person relationship between perceived progress in job search and persistence in job search may be unique to labor market new entrants. Because these job seekers are generally less clear about the type of jobs they desire (i.e., lower goal clarity), they are more likely to adjust the

goal difficulty during job search process. When they perceive progress in job search, they feel confident about their ability to perform job search related tasks; thus, they are likely to positively revise the behavior goal (e.g., spend one more hour on job search than planned on each day) and employment goal (e.g., obtain a position with higher salary) which creates higher motivation to search jobs more intensively. On the other hand, experienced job seekers may have a relatively more stable behavior goal or employment goal, perhaps due to more family responsibility and lower levels of career mobility. Thus, perceived progress in job search may lead to smaller discrepancy between the current and desired situation, which may in turn lead to lower motivation to search jobs more intensively. In sum, goal revision may be a more plausible choice for student job seekers than for unemployed job seekers. This may explain why the current study found support to both social cognitive theory and control theory, while Wanberge et al. (2010) only find support for the control theory. Future studies should try to replicate the current findings in samples of unemployed job seekers and older adults searching for employment opportunities (e.g., Adams & Rau, 2004; Zhan, Wang, Liu, & Schultz, 2009). Cross-validation among different types of participants could provide further support or suggest important boundary conditions for the model tested in the current study.

Job Market Conditions

It is important to note that the job market condition under which job search was conducted might be an important boundary condition of the current model. In the area of economics, researchers have recognized the impact of labor market conditions on job search and employment success (e.g., Mortensen, 1984). In fact, the 2010

Nobel Price in Economic Science was awarded to three economists "for their analysis of markets with search frictions" (The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel, 2010). However, in the area of applied psychology, there is a lack of previous research on the relationship between job market conditions and job search behaviors and job search outcomes. Extant research on job seekers' perceptions regarding labor market conditions did not show clear effects on job employment outcomes. For example, Wanberg, Hough, & Song (2002) found that unemployed job seekers' self-reported labor market demand was not significantly related to their reemployment speed. To the author's knowledge, no previous studies have examined whether the relationship between job search self-efficacy and job search behaviors or the relationship between job search behavior and employment outcome is moderated by labor market conditions. However, it is conceivable that under weak economic conditions, job seekers are likely to be rejected repeatedly and feel helplessness (van Ryn & Vinokur, 1992). Thus, at extremely low levels of employment self-efficacy, the relationships shown in this model might not hold. For example, even when job seekers have high levels of job search behavior self-efficacy (e.g., feeling confident in doing an interview), they might not engage in any job search behavior when they perceive no job opportunities at all on the labor market. Future studies should more explicitly study the effect of labor market conditions on the dynamic model of job search.

Why the Within-Person Level of Analysis?

There is an increased recognition that although cross-sectional research contributes to our understanding of performance based on observations of stable

differences between-persons, many of our theories as well as our subjective experiences tell us that self-regulatory processes vary within individuals (Lord, Diefendorff, Schmidt, & Hall, 2010). For example, in the current study, job search cognitions, behaviors, and outcome all vary significantly at the within-person level of analysis. In addition, within-person relationships could be different from the between-person relations in both magnitude and direction, which could have significant theoretical and methodological implications. Third, between-person relationship estimates could be confounded due to individuals' ability or stable characteristics (e.g., job search skills confound the measurement of job search behavior self-efficacy). Thus, a within-person relationship could control for the effects of these person-level variables. Fourth, many of the practical motivational issues that job seekers and career counselors face are at least implicitly within-person in nature (e.g., "how can I *do better* in job search?"). Thus, the effort to study the within-person dynamic processes in job search is warranted.

Limitations and Directions for Future Research

The current study has several limitations that need to be noted. First, the survey design limited my ability to draw causal inferences from the findings of the current study. Specifically, because of practical and ethical concerns, we were unable to manipulate job seekers' perceived progress or their self-efficacy, thus causal relationships cannot be inferred from the current study. However, I did temporarily separate the measurement of job search self-efficacy and job search behaviors to reduce the common variances (Padsakoff, MacKenzie, Lee, & Podsakoff, 2003). In addition, testing self-regulation processes in a naturalistic setting is the goal of the

current study. That being said, I recommend future studies to try manipulating different types of self-efficacy and replicate the self-regulation process of this type of goal structure in the lab setting.

Second, the current study did not examine the role of social norms on job search behaviors. Job search research using the theory of planned behavior (e.g., Song et al., 2006; Wanberg et al., 2005) has suggested that subjective norms, the extent to which unemployed individuals believe their significant others expect them to exert effort toward finding a job, could predict job search behaviors. In addition, as suggested by the social cognitive theory, modeling plays an important role in shaping one's self-efficacy. For example, Bandura (1986) suggested that one important experience that serves as the source of information needed to develop self-efficacy is vicarious experiences, which consist of observing people model a target behavior. Vicarious experiences are especially powerful for complex behavior routines that are modeled by individuals perceived as similar to the observer. However, the effects of family or peer influence on job search behaviors have not received much research attention (c.f., Zikic & Saks, 2009; Solberg, Good, & Nord, 1994; Côté et al., 2006). Recent research has suggested that employees' turnover decision is influenced by perceived coworker job search behaviors (Felps, Mitchell, Hekman, Lee, Holtom, & Harman, 2009). Thus, future studies should examine the role of subjective and injunctive norms on college graduates' job search intentions and behaviors.

Third, future studies on the dynamic process of job search should incorporate the stress and coping processes in predicting job search effort and outcomes (e.g., Vinokur & Schul, 2002). McKee-Ryan, Song, Wanberg, and Kinicki's (2005) meta-

analysis showed that job search is related to lower psychological well-being of job seekers, suggesting that job search may play a dual role of being both a beneficial coping strategy as well as a stressor. Thus, it is important to consider the coping process in a dynamic model of job search. For example, job seekers may use daily functional activities (Reis, Sheldon, Gable, Roscoe, & Ryan, 2000), such as activities to gain competency and relatedness to restore confidence to sustain job search efforts. In addition, future studies could examine the extent to which emotional resources (e.g., emotional regulation self-efficacy and daily mood) and personal resiliency (e.g., Fleig-Palmer, Luthans, & Mandernach, 2009) influence dynamic job search behaviors. Further, there are other possible mediators through which perceived progress influences job search behavior that could be examined by additional research (e.g., job search distress, Cianci, Klein, & Seijts, 2010; Song et al., 2006).

Fourth, the current study did not examine the long-term effects of job search behaviors. In particular, it is unclear to what extent the employment quality of student job seekers is determined by their job search intensity. For example, Saks and Ashforth (2002) found that job search behavior and career planning were positively related to pre-entry person–job (P-J) and person– organization (P-O) fit perceptions, and pre-entry P-J fit perceptions mediated the relationship between career planning and post-entry P-J fit perceptions. These results indicated that job search behaviors could significantly influence (re)employment quality. Future studies should examine whether job search intensity leads to objective indicators of employment quality, such as starting salary and length of service on a job. In addition, future studies could also examine whether the quality of employment might be affected by the type of job

search behaviors individuals engage in (e.g., Huffman & Torres, 2001; Koen, Klehe, Van Vianen, Zikic, & Nauta, 2010). For example, an early study by Schwab (1982) showed that informal sources, especially employee referrals, resulted in higher one-year survival rates. More formal procedures, such as want ads and private employment agencies, were associated with lower survival rates.

Fifth, it is important to recognize that job attainment and quality of employment do not just depend on job search behaviors. Other variables such as the labor market demand (e.g., Leana & Feldman, 1995; Wanberg et al., 2002), interviewing skills (Maurer, Solamon, Andrews, & Troxtel, 2001; Caldwell & Burger, 1998), career exploration (Zikic & Klehe, 2006; Werbel, Song, & Yan, 2008), and discrimination in personnel selection (e.g., Cable & Murray, 1999) also influence job attainment. Because the focus of the current study is on the predictors and outcomes of job search behaviors, these variables were not included in the study design. Future studies should draw on a multi-disciplinary perspective and examine the impact of these factors on the dynamic job search process

CONCLUSIONS

The current study focused on the dynamic motivational antecedents of job search success among a sample of Chinese college seniors. Drawing on the multiple-goal self-regulation literature, I conceptualized job search behaviors as guided by two hierarchically structured goals, job search behavior goal and employment goal. Specifically, job search behavior serves as the means to achieve the employment goal. Corresponding to the job search behavior goal, job search behavior self-efficacy refers to job seeker's self-efficacy regarding performing job search related behaviors.

Corresponding to the employment goal, employment self-efficacy refers to job seeker's self-efficacy regarding obtaining employment.

The results showed that at the within-person level of analysis, job search behavior self-efficacy was positively related to job search behaviors, consistent with the prediction of the social cognitive theory. Employment self-efficacy was negatively related to job search behaviors, consistent with the prediction of the control theory. Job search behavior self-efficacy and employment self-efficacy could be predicted by perceived job search progress. In addition, the relationships between perceived job search progress and two types of self-efficacy beliefs were moderated by performance goal orientation and internal attributions such that the positive relationships were stronger (vs. weaker) for job seekers with higher (vs. lower) levels of performance goal orientation and when job seekers make internal (vs. external) attributions regarding their progress. Finally, active job search behaviors were positively related to number of job offers received.

Overall, this research suggests that at the within-person level of analysis, both social cognitive theory and the control theory could be used to explain the dynamic process in job search. Nevertheless, a hierarchical goal structure is needed to incorporate both perspectives in explaining the dynamic self-regulation processes in the naturalistic job search settings.

Footnotes

[1] It is important to note that although I define job search behavior self-efficacy as self-efficacy regarding performing means, it is different from the construct of "means efficacy", which is defined as the individuals' belief in the utility of the tools available for performing the job (Eden, 2001; Eden, Ganzach, Flumin-Granat, & Zigman, 2010). Eden and colleagues argued that individuals ascribe utility value to whatever means, or tools, may facilitate – or hamper – their performance. The means exist independently of the individual's ability, and belief in the means is different from belief in self. For example, computer is an important tool for effective job performance, and means efficacy asks the reliability and usefulness of computers.

[2] I also conducted supplementary analysis comparing participants who found a job during the study period, thus provided less than 11 within-person observations with participants who failed to find a job during the study. This dichotomous variable did not moderate the within-person relationships reported in the results section.

[3] I also controlled for the demographics (i.e., age, gender, and GPA), order effect (whether there is a linear with time), and day-of-the-week effect (Wednesday vs. Sunday). For the purpose of brevity, I presented the coefficients for these effects in a different table (Table 3).

[4] To control for the effect of first order auto-correlation, I also controlled for the effect of perceived job search progress in the previous half-week (Time T). The first order auto-correlation is significant ($\gamma = .12$, $p < .01$). However, including this effect did not change the relationship between number of job offers (Time T+1) and perceived job search progress (Time T+1).

[5] Although not directly hypothesized, the current conceptual model portrays job search behavior self-efficacy and employment self-efficacy as mediators of the relationship between perceived job search progress and subsequent job search behaviors. It also suggests goal orientation as a moderator between perceived progress and efficacy beliefs. Thus, following Bauer, Preacher, and Gil's (2006) procedures, I also examined the within-person level mediation as well as the multilevel moderated mediation. Specifically, the indirect effect of perceived job search progress on active job search behavior through employment self-efficacy is only marginally significant (the average indirect effect = -.02, $.05 < p < .10$). The indirect effect of perceived job search progress on active job search behavior through job search behavior self-efficacy is significant (the average indirect effect = .02, $p < .05$). Higher levels of perceived job search progress leads to higher levels of active job search behaviors via higher levels of job search behavior self-efficacy. The indirect effect of perceived job search progress on preparatory job search behavior through employment self-efficacy is significant (the average indirect effect = -.03, $p < .05$). Higher levels of perceived job search progress leads to lower levels of preparatory job search behaviors via higher levels of employment self-efficacy. These results suggest that job search progress feeds back to people's job search behaviors through influencing their self-efficacy beliefs. Although I did not hypothesize moderated mediation, I also estimated the indirect effects of perceived job search progress at higher (1+ SD) and lower levels (-1 SD) of PGO on preparatory job search behaviors in a post hoc analysis. I found that the indirect effect was significantly higher when PGO was higher (*Estimate* = .04, *SE* = .01, $p < .01$) than

when PGO was lower (*Estimate* = -.01, *SE* = .01, $p > .10$). Thus, it seems that PGO moderated the mediation effect of employment self-efficacy between perceived job search progress and preparatory job search behaviors

TABLE 1

Means, standard deviations, and intercorrelations among studied variables

Variables	Mean	Within-subject SD	Between-subject SD	1	2	3	4	5	6	7	8
1. Age	23.53		1.79	--							
2. Gender	.42		.50	.00	--						
3. GPA	3.06		.35	.27**	-.30**	--					
4. LGO	5.63		1.16	-.04	-.15	-.01	(.84)				
5. PGO	3.64		1.69	-.19*	.14	-.09	-.10	(.76)			
6. Perceived Job Search Progress	2.77	.77	.52	-.11	-.06	.16	.04	-.09	(.78)	.44**	.32**
7. Job Search Behavior Self-Efficacy	2.76	.72	.50	.16	.09	.19*	.01	-.13	.57**	(.70)	.46**
8. Employment Self-Efficacy	3.12	.93	.70	-.05	-.09	.17*	.07	-.23**	.51**	.60**	(.84)
9. Internal Attribution	3.09	.83	.51	-.05	.05	-.05	.00	-.11	.09	.30**	.11
10. Preparatory Job Search Behavior	2.38	.87	.64	-.07	.03	-.11	.04	-.01	.12	.10	-.06
11. Active Job Search Behavior	2.08	.89	.76	.18*	.01	-.12	-.04	.20*	.00	-.13	-.22*
12. Number of Job Offers	.43	.82	.81	-.10	-.04	.00	-.04	.10	.11	-.11	.01

9	10	11	12
.10**	.11**	.04	.10*
.20**	.10**	-.02	-.02
.12**	-.03	-.09**	-.07**
(.70)	.01	-.03	-.12**
.05	(.78)	.52**	.17**
-.11	.69**	(.89)	.31**
-.25**	.21**	.28**	--

Note. LGO = learning goal orientation. PGO = performance goal orientation. Gender was coded "0" for men and "1" for women. Correlations below the diagonal represent between-subject correlations ($N = 133$). To calculate the between-subject correlations, within-subject variables (i.e., perceived job search progress, job search behavior self-efficacy, employment self-efficacy, internal attribution, preparatory job search behavior, active job search behavior, and number of job offers) were averaged across measurement occasions. Correlations above the diagonal represent within-subject correlations ($N = 1052$). * $p < .05$, ** $p < .01$.

TABLE 2

Multilevel model (M_1) with within-person level main effects and interaction effects

Predictive Relationship	**Coefficient**	***SE***	**95% CI**
Perceived Job Search Progress + Attribution + Interaction → Job Search Behavior Self-Efficacy			
Level-1			
Internal Attribution (γ_{21})	0.09**	0.03	[0.03, 0.15]
Perceived Job Search Progress × Internal Attribution (γ_{31})	0.15**	0.04	[0.07, 0.24]
Residual Variance ($\sigma^2_{\text{within(Job Search Behavior Self-Efficacy)}}$)	0.26**	0.02	[0.22, 0.29]
Level-2			
Random Intercept (β_0)			
Intercept (γ_{00})	2.19**	0.81	[0.60, 3.79]
Residual Variance (σ^2_{e0})	0.16**	0.03	[0.11, 0.21]
Random Slope (β_1)			
Intercept (γ_{10})	0.23**	0.04	[0.16, 0.30]
Variance (τ_1)	0.03†	0.02	[0.00, 0.07]
Perceived Job Search Progress + Attribution + Interaction → Employment Self-Efficacy			
Level-1			
Internal Attribution (γ_{61})	0.11**	0.04	[0.04, 0.19]
Perceived Job Search Progress × Internal Attribution (γ_{71})	0.21**	0.05	[0.12, 0.30]
Residual Variance ($\sigma^2_{\text{within(Employment Self-Efficacy)}}$)	0.42**	0.04	[0.35, 0.49]
Level-2			
Random Intercept (β_4)			
Intercept (γ_{40})	3.88**	0.99	[1.94, 5.82]
Residual Variance (σ^2_{e4})	0.32**	0.06	[0.22, 0.44]
Random Slope (β_5)			
Intercept (γ_{50})	0.15**	0.04	[0.08, 0.22]
Variance (τ_5)	0.01	0.02	[-0.03, 0.05]
Job Search Self-Efficacy + Employment Self-Efficacy → Preparatory Job Search Behavior			
Level-1			
Job Search Behavior Self-Efficacy (γ_{91})	0.07†	0.04	[0.00, 0.14]
Employment Self-Efficacy(γ_{101})	-0.13**	0.04	[-0.21, -0.05]
Residual Variance ($\sigma^2_{\text{within(Preparatory Job Search Behavior)}}$)	0.35**	0.03	[0.30, 0.41]
Level-2			
Random Intercept (β_8)			

Intercept (γ_{80})	1.57	1.00	[-0.39, 3.52]
Residual Variance (σ^2_{e8})	0.31**	0.04	[0.23, 0.39]
Job Search Self-Efficacy + Employment Self-Efficacy → Active Job Search Behavior			
Level-1			
Job Search Behavior Self-Efficacy (γ_{121})	0.15**	0.03	[0.09, 0.14]
Employment Self-Efficacy(γ_{131})	-0.08**	0.03	[-0.14, -0.02]
Residual Variance ($\sigma^2_{within(Active\ Job\ Search\ Behavior)}$)	0.27**	0.02	[0.22, 0.31]
Level-2			
Random Intercept (β_{11})			
Intercept (γ_{110})	0.60	0.78	[-0.92, 2.11]
Residual Variance (σ^2_{e11})	0.32**	0.04	[0.24, 0.40]
Preparatory Job Search Behavior + Active Job Search Behavior → Number of Job Offers			
Level-1			
Preparatory Job Search Behavior (γ_{151})	0.13	0.13	[-0.13, 0.39]
Active Job Search Behavior (γ_{161})	0.34**	0.13	[0.09, 0.60]
Level-2			
Random Intercept (β_{14})			
Intercept (γ_{140})	0.72	2.02	[-3.24, 4.67]
Number of Job Offers → Perceived Job Search Progress			
Level-1			
Perceived Job Search Progress (γ_{181})	0.21**	0.04	[0.13, 0.28]
Level-2			
Random Intercept (β_{17})			
Intercept (γ_{171})	3.14**	0.86	[1.44, 4.83]
Residual Variance (σ^2_{e17})	0.17**	0.13	[0.11, 0.23]

Note. At the between-person level $N = 133$; at the within-person level $N = 1052$.

† $p < .10$, *$p < .05$, **$p < .01$.

Table 3

Multilevel model (M_1) results regarding control variables

			Outcome Variable									
			Job Search Behavior Self-Efficacy		Employment Self-Efficacy		Preparatory Job Search Behavior		Active Job Search Behavior		Number of Job Offers	
			Coefficient	SE	Coefficient	SE	Coefficient	SE	Coefficient	SE	Coefficient	SE
Predictors	Between-Person	Age	.00	.03	-.08**	.03	.03	.03	.03	.03	-.20**	.07
		Gender	.09	.09	-.13	.13	-.02	.11	-.05	.12	.05	.24
		School1	-.04	.16	.40	.21	.34	.19	.44*	.19	1.04**	.39
		School2	-.37**	.12	-.50**	.16	.45**	.14	1.05**	.15	1.21**	.39
		School3	-.17	.11	-.07	.16	.63**	.14	1.07**	.14	.47	.40
		GPA	.27*	.12	.34	.18	.05	.18	.11	.16	.45	.31
	Within-Person	Weekday	.01	.03	.08	.05	-.33**	.04	-.13**	.04	-.04	.02
		Order	-.01	.01	.04**	.01	-.04**	.01	.00	.01	.03	.08

Note. School1, School2, and School3 were dummy coded variables to indicate which school the participant is in.

At the within-person level $N = 1052$; At the between-person level-2 $N = 133$.

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

Table 4

Multilevel model (M_2) with between-person level moderation effects

Predictive Relationship	**Coefficient**	***SE***	**95% CI**
Perceived Job Search Progress + Attribution + Interaction → Job Search Behavior Self-Efficacy			
Level-1			
Internal Attribution (γ_{21})	0.09**	0.03	[0.03, 0.15]
Perceived Job Search Progress × Internal Attribution (γ_{31})	0.15**	0.04	[0.07, 0.23]
Residual Variance ($\sigma^2_{\text{within(Job Search Behavior Self-Efficacy)}}$)	0.26**	0.02	[0.22, 0.29]
Level-2			
Random Intercept (β_0)			
Intercept (γ_{00})	2.19**	0.81	[0.60, 3.79]
Residual Variance (σ^2_{e0})	0.16**	0.03	[0.11, 0.21]
Random Slope (β_1)			
Intercept (γ_{10})	-0.01	0.17	[-0.34, 0.33]
Learning Goal Orientation (γ_{11})	0.02	0.03	[-0.03, 0.07]
Performance Goal Orientation (γ_{12})	0.04*	0.02	[0.00, 0.08]
Variance (τ_1)	0.03†	0.02	[0.00, 0.06]
Perceived Job Search Progress + Attribution + Interaction → Employment Self-Efficacy			
Level-1			
Internal Attribution (γ_{61})	0.12**	0.04	[0.04, 0.19]
Perceived Job Search Progress × Internal Attribution (γ_{71})	0.20**	0.05	[0.11, 0.28]
Residual Variance ($\sigma^2_{\text{within(Employment Self-Efficacy)}}$)	0.42**	0.04	[0.35, 0.49]
Level-2			
Random Intercept (β_4)			
Intercept (γ_{40})	3.88**	0.99	[1.93, 5.83]
Residual Variance (σ^2_{e4})	0.32**	0.06	[0.21, 0.44]
Random Slope (β_5)			
Intercept (γ_{50})	-0.25	0.16	[-0.58, 0.05]
Learning Goal Orientation (γ_{51})	0.02	0.03	[-0.02, 0.08]
Performance Goal Orientation (γ_{52})	0.07*	0.02	[0.03, 0.12]
Variance (τ_5)	0.00	0.01	[-0.03, 0.03]
Job Search Self-Efficacy + Employment Self-Efficacy → Preparatory Job Search Behavior			
Level-1			
Job Search Behavior Self-Efficacy (γ_{91})	0.07†	0.04	[0.00, 0.14]
Employment Self-Efficacy(γ_{101})	-0.13**	0.04	[-0.21, -0.05]

Residual Variance ($\sigma^2_{within(Preparatory\ Job\ Search\ Behavior)}$)	0.35**	0.03	[0.30, 0.41]
Level-2			
Random Intercept (β_8)			
Intercept (γ_{80})	1.57	1.00	[-0.39, 3.52]
Residual Variance (σ^2_{e8})	0.31**	0.04	[0.23, 0.39]
Job Search Self-Efficacy + Employment Self-Efficacy → Active Job Search Behavior			
Level-1			
Job Search Behavior Self-Efficacy (γ_{121})	0.15**	0.03	[0.09, 0.14]
Employment Self-Efficacy(γ_{131})	-0.08**	0.03	[-0.14, -0.02]
Residual Variance ($\sigma^2_{within(Active\ Job\ Search\ Behavior)}$)	0.27**	0.02	[0.22, 0.31]
Level-2			
Random Intercept (β_{11})			
Intercept (γ_{110})	0.60	0.78	[-0.92, 2.11]
Residual Variance (σ^2_{e11})	0.32**	0.04	[0.24, 0.40]
Preparatory Job Search Behavior + Active Job Search Behavior → Number of Job Offers			
Level-1			
Preparatory Job Search Behavior (γ_{151})	0.13	0.13	[-0.13, 0.39]
Active Job Search Behavior (γ_{161})	0.34**	0.13	[0.09, 0.60]
Level-2			
Random Intercept (β_{14})			
Intercept (γ_{140})	0.72	2.02	[-3.24, 4.67]
Number of Job Offers → Perceived Job Search Progress			
Level-1			
Perceived Job Search Progress (γ_{181})	0.21**	0.04	[0.13, 0.28]
Level-2			
Random Intercept (β_{17})			
Intercept (γ_{171})	3.14**	0.86	[1.44, 4.83]
Residual Variance (σ^2_{e17})	0.17**	0.13	[0.11, 0.23]

Note. At the between-person level $N = 133$; at the within-person level $N = 1052$.

† $p < .10$, *$p < .05$, **$p < .01$.

Figure Captions

Figure 1. The hypothesized model. + = positive relationship; – = negative relationship.

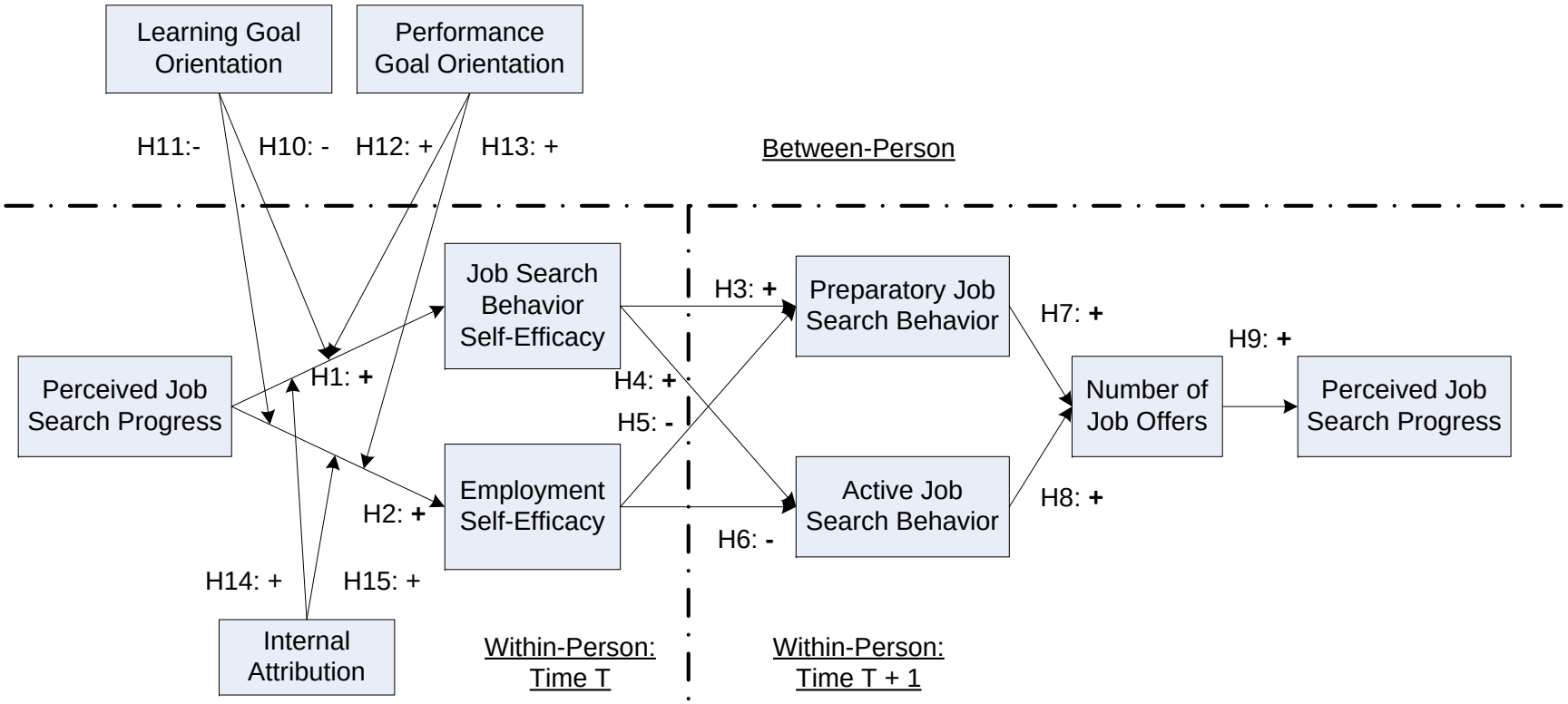
Figure 2. Final model with coefficient estimates. † $p < .10$, *$p < .05$, **$p < .01$. Dotted line denotes non-significant path.

Figure 3. Internal attribution as a moderator of the relationship between perceived job search progress and job search behavior self-efficacy.

Figure 4. Internal attribution as a moderator of the relationship between perceived job search progress and employment self-efficacy.

Figure 5. Performance goal orientation as a moderator of the relationship between perceived job search progress and job search behavior self-efficacy.

Figure 6. Performance goal orientation as a moderator of the relationship between perceived job search progress and employment self-efficacy.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Performance Goal Orientation
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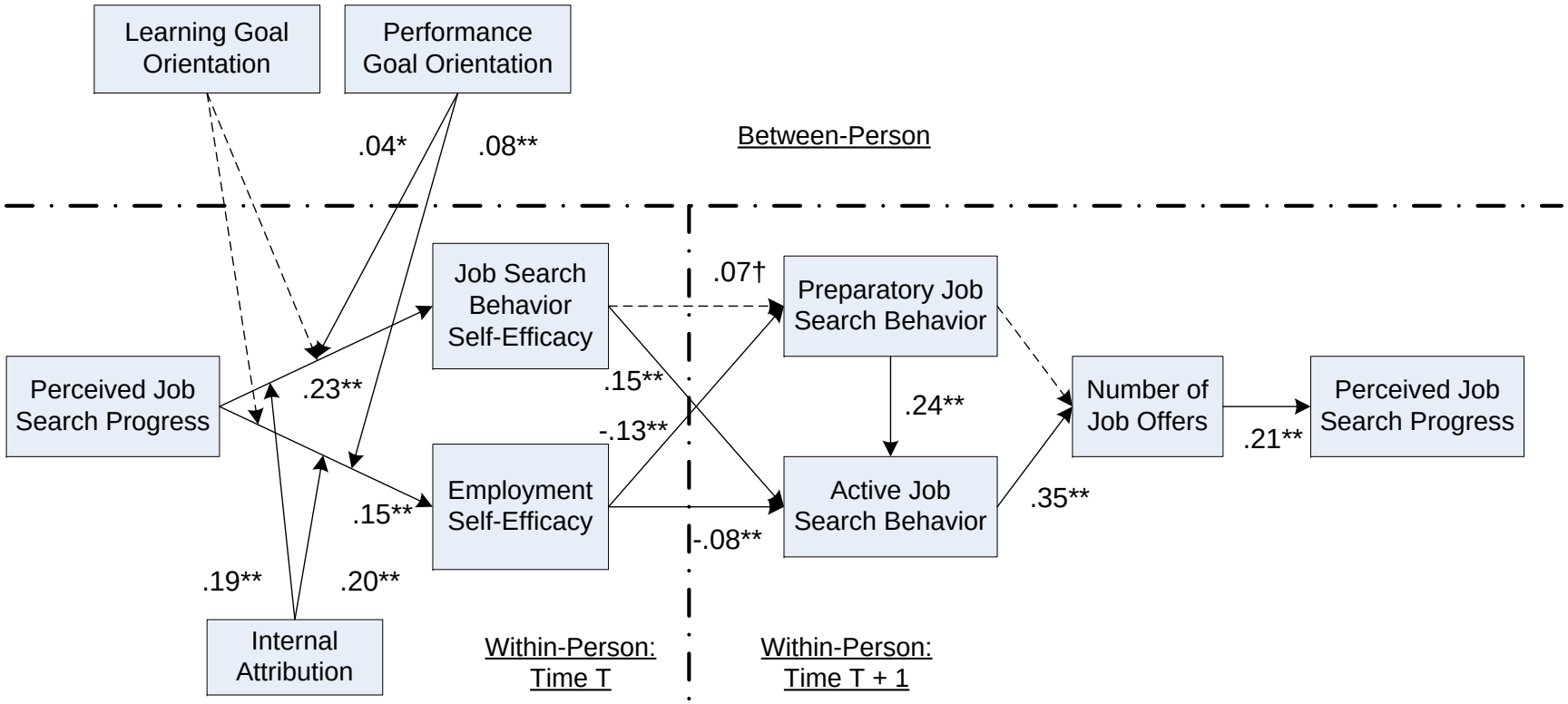
H10: -
H12: +
H13: +
Between-Person
Job Search Behavior Self-Efficacy
H3: +
Preparatory Job Search Behavior
H7: +
H9: +
Perceived Job Search Progress
H1: +
H4: +
H5: -
Number of Job Offers
Perceived Job Search Progress
Employment Self-Efficacy
H2: +
H6: -
Active Job Search Behavior
H8: +
H14: +
H15: +
Internal Attribution
Within-Person: Time T
Within-Person: Time T + 1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.08**
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.23**
.15**
-.13**
.24**
Number of Job Offers
.21**
Perceived Job Search Progress
Employment Self-Efficacy
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-.08**
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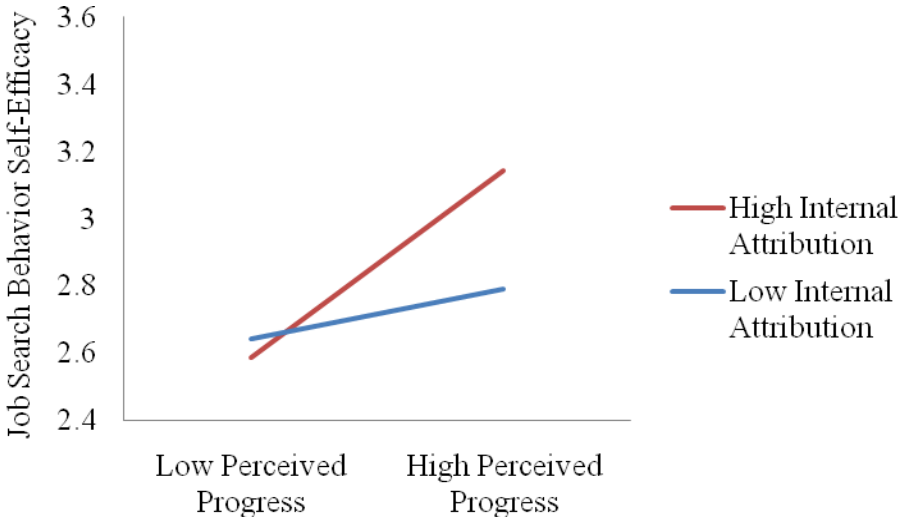
Internal Attribution
Within-Person: Time T
Within-Person: Time T + 1


Job Search Behavior Self-Efficacy
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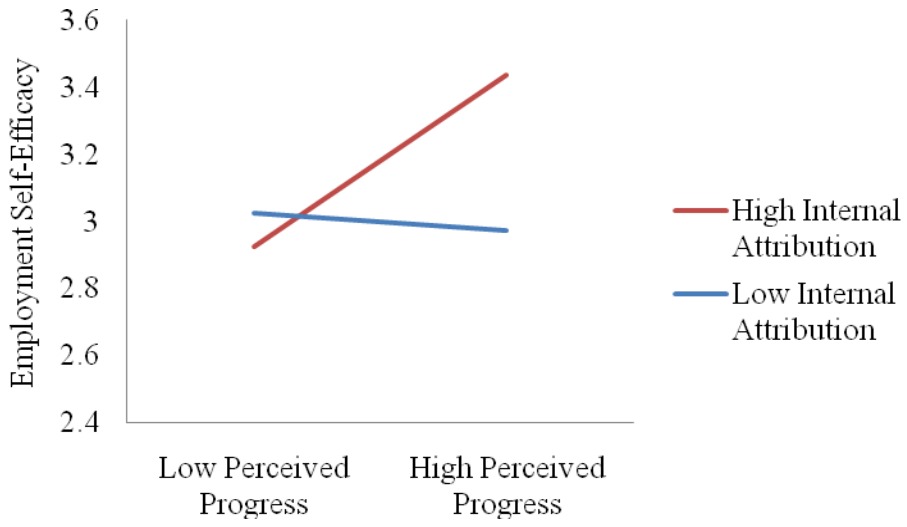
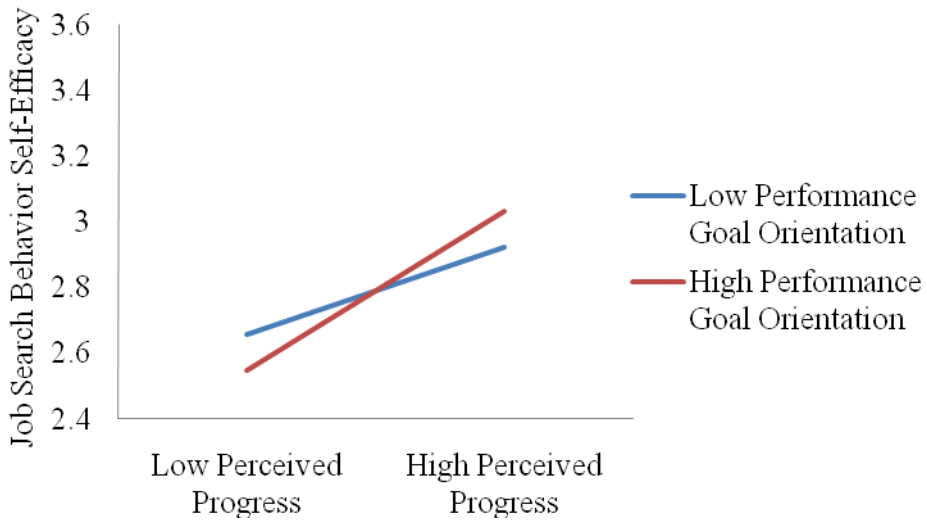
3.4
3.2
3
2.8
2.6
2.4
Low Perceived Progress
High Perceived Progress
High Internal Attribution
Low Internal Attribution


Employment Self-Efficacy
3.6
3.4
3.2
3
2.8
2.6
2.4
Low Perceived Progress
High Perceived Progress
High Internal Attribution
Low Internal Attribution


Job Search Behavior Self-Efficacy
3.6
3.4
3.2
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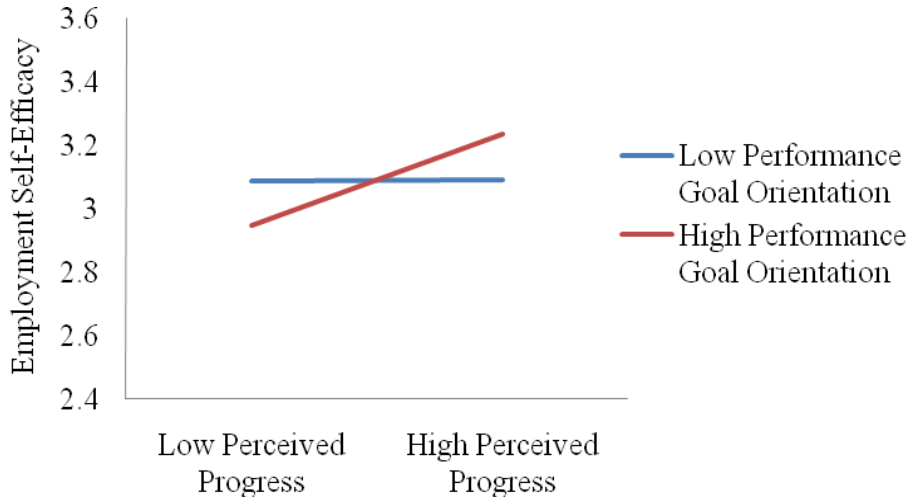
2.8
2.6
2.4
Low Perceived Progress
High Perceived Progress
Low Performance Goal Orientation
High Performance Goal Orientation


Employment Self-Efficacy
3.6
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2.8
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2.4
Low Perceived Progress
High Perceived Progress
Low Performance Goal Orientation
High Performance Goal Orientation

Appendix A: Exploratory Factor Analysis Results for Job Search Behavior Items

Items	Factor Loading	
	Preparatory Job Search Behavior	Active Job Search Behavior
4. Used the internet or other computer services to locate job openings	.74	
5. Listed you as a job applicant in a newspaper, journal of professional association	.59	
6. Sent your resumes to potential employers	.56	
2. Prepared a book or article or other computer services to locate job openings	.52	
1. Read the help wanted/classified ads in a newspaper, journal, or professional association	.49	
3. Read a book or article about getting a job or changing jobs	.47	
7. Filled out a job applicant	.46	
10. Telephoned a prospective employer		.73
9. Contacted an employment agency		.71
16. Spoke with previous employers or business acquaintances about their knowledge of potential job leads		.71
14. Secured leads from contacts or acquaintances regarding a person to contact for information that would help you in your job search		.70
8. Had a job interview with a prospective employer		.67
13. Asked for referral to someone who might have helpful information or advice about your career or industry		.66
12. Called or visited someone just to get more information about a certain job or place to work		.64
11. Contacted people you know to ask for their advice or leads regarding your job search		.54
15. Talked with friends or relatives about possible job leads		.52

Appendix B: Scale Items Used in the Study

Goal Orientation:

Scale

1 = Not at all true of me

2 = Not true of me

3 = A little not true of me

4 = Not sure

5 = A little true of me

6 = True of me

7 = Very true of me

1. I want to learn as much as possible from my job search experience.
2. I see job search as a continuous learning process.
3. I desire to learn much knowledge I cannot acquire in the classroom.
4. I just want to avoid doing poorly in my job search.
5. My goal for my job search is to avoid performing poorly.
6. My worry about performing poorly than others in job search is often what motivates me.

Perceived Job Search Progress

Scale

1 = Strongly disagree

2 = Disagree

3 = Neither agree nor disagree

4 = Agree

5 = Strongly agree

1. From Monday to Wednesday/From Thursday to Sunday, I have made progress in job search.
2. From Monday to Wednesday/From Thursday to Sunday, I have made advancement in job search.
3. From Monday to Wednesday/From Thursday to Sunday, I moved forward in job search.
4. From Monday to Wednesday/From Thursday to Sunday, things did not go well with my job search. *
5. From Monday to Wednesday/From Thursday to Sunday, I got a lot less done with my job search than I had hoped. *
6. From Monday to Wednesday/From Thursday to Sunday, I hardly made any progress in looking for a job. *

Attribution

Scale

1 = Strongly disagree

2 = Disagree

3 = Neither agree nor disagree

4 = Agree

5 = Strongly agree

1. My effort
2. My ability
3. The social connections I established

Job Search Behavior Self-Efficacy

Scale

1 = Strongly disagree

2 = Disagree

3 = Neither agree nor disagree

4 = Agree

5 = Strongly agree

1. When I make plans about my job search actions, I am certain I can make them work.
2. I feel that I am strong enough to overcome the difficulties in the job search process.
3. I feel that I can handle the situations that job search brings.

Employment Self-Efficacy

Scale

1 = Strongly disagree

2 = Disagree

3 = Neither agree nor disagree

4 = Agree

5 = Strongly agree

1. I am confident in landing a job.
2. Getting a job won't be a problem for me.
3. I am optimistic about getting a job.

Job Search Behaviors

Scale

1 = Never

5 = I did it every day

1. Read the help wanted/classified ads in a newspaper, journal, or professional association.
2. Prepared/revised your resume.
3. Read a book or article about getting a job or changing jobs.
4. Used the internet or other computer services to locate job openings.
5. Listed you as a job applicant in a newspaper, journal of professional associations.
6. Sent your resumes to potential employers.

7. Filled out a job application.
8. Had a job interview with a prospective employer.
9. Contacted an employment agency, executive search firm or state employment service.
10. Telephoned a prospective employer.
11. Contacted people you know to ask for their advice or leads regarding your job search.
12. Called or visited someone just to get more information about a certain job or place to work.
13. Asked for a referral to someone who might have helpful information or advice about your career or industry.
14. Secured leads from contacts or acquaintances regarding a person to contact for information that would help you in your job search.
15. Talked with friends or relatives about possible job leads.
16. Spoke with previous employers or business acquaintances about their knowing of potential job leads.

Note. * denotes reversed coded items.

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