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RUNNING HEAD: Daily Job Search and Psychological Distress

A daily repeated measures study of job search and distress: Evidence from China

Abstract

We examined the relationship between job search and distress using the daily diary method that involved 100 unemployed job seekers in China. Three models were tested: a direct relationship model (examining the effect of job search on distress), a reversed relationship model (assessing the impact of distress on job search), and a third variable model (testing the extent to which daily financial strain accounts for the relationship between job search and distress). Results offered support for both direct and reversed models. The third variable model was not supported. Negative job search experience mediated the direct effect of job search on distress. Using a within-individual approach, our study provides an in-depth examination on the nature and directionality of the relationship between job search and distress and illuminates the dynamic nature of this relationship.

Each year, millions of employees are forced to leave their jobs in events such as downsizing, restructuring, mergers, and acquisitions (U.S. Department of Labor, 2004; Wanberg, Hough, & Song, 2002). Numerous psychological studies have documented the negative impact of job loss on the physical, mental, and social functioning of unemployed workers and their family members (e.g., McKee-Ryan, Song, Wanberg, & Kinicki, 2005; van Ryn & Vinokur, 1992; Vinokur & Schul, 2002). At the aggregated level, researchers have linked the proliferation of unemployment with increases in mortality rate and mental hospitalizations (e.g., Brenner, 1973). At the individual level, studies have demonstrated that job loss is associated with increased anxiety, depression, sleeping problems, alcohol disorder, divorce, and child abuse (e.g., Dooley, Fielding, & Levi, 1996).

One of the most practical ways to respond to the unemployment situation is to look for a new job. Job search has been commonly conceptualized and tested as a major type of problem-focused coping behavior (e.g., McKee-Ryan et al., 2005; Wanberg, 1997), whereby individuals conduct job search in order to directly address the unemployment condition. In the coping literature, a positive relationship between problem-focused coping and well-being is generally expected (Thoits, 1995). A recent meta-analysis, however, showed that job search is related to lower, rather than higher, psychological well-being of job seekers (McKee-Ryan et al., 2005), suggesting that job search may play a dual role of being both a beneficial coping strategy as well as a stressor.

While the unemployment literature is replete with studies examining the relationship between mental health and unemployment (e.g., Hamilton, Hoffman, Broman, & Rauma, 1993), there is a contrasting lack of studies that have aimed to understand the dynamic relationship between job search and distress experienced by job seekers. Furthermore, most empirical studies

on distress and unemployment are either cross-sectional in nature or include only a limited number of time waves (McKee-Ryan et al., 2005). There is a dearth of studies that use within-person approach which allows for an examination of the dynamic relationships of the variables of interest as they occur within the individual over a period of time. Within-person variability provides a more in-depth understanding of the processes linking the predictor and criterion variables as within-person research can rule out spurious third variable explanations and coincident trends (Beal & Weiss, 2003). Our study addresses this gap by focusing on the within-person relationship between job search and distress over time. In particular, we used a 14-day diary methodology to provide critical insights on (a) the effect of job search on the daily distress experienced by job seekers (i.e., a direct relationship model), (b) the impact of reported distress on job search effort (i.e., a reversed relationship model), and (c) the extent to which daily financial strain accounts for the relationship between job search and distress (i.e., a third variable model).

We collected data from China, a transitional and developing economy that has experienced a phenomenal growth in the past three decades. Alongside this rapid growth, drastic economic and social reforms have made many workers, mainly from the state-owned sector, unemployed and dislocated (Price & Fang, 2002). Although there are a few publications on Chinese unemployed workers (e.g., Price & Fang, 2002; Price, Choi, & Lim, 2006), they focused solely on the well-being of unemployed individuals. In this study, we examined job search and its relationship with distress in a Chinese context.

The Direct Relationship model

The first purpose of our study is to examine a direct relationship model to assess the effect of job search on the distress level of the job seeker. The fundamental rationale to support

this model lies in the argument that job search can be considered as one type of stressor that can lead to distressful reactions from job seekers. There is evidence to show that coping behaviors could sometimes be a source of stress (Schönpflug, 1985). The model of conservation of resources (Hobfoll, 1988; 1989) maintains that individuals experience distress when they face the danger of loss of resources. They will try to minimize net resource loss by activating, borrowing, or risking personal resources to offset potential or actual resource loss. Since these offsetting coping actions have to mobilize and could potentially drain valuable resources, such behaviors could lead to further distress. In the job search area, it has been suggested that job search can be viewed as one type of stressor during unemployment (Fielden & Davidson, 1999; Waters, 2000). The job search process has been characterized as very demanding (Vinokur & Schul, 2002). It can exhaust an individual's psychological energy and could lead a job seeker to become dispirited (Wanberg, 1997).

To examine the mechanisms of the linkage between job search effort and next-day stress, we also propose one possible mediating factor, negative search experience which accounts for the setbacks and obstacles encountered during job search. Failure to identify possible job leads and rejections are part of the negative search experience (Barber, Daly, Giannantonio, & Phillips, 1994; Stumpf, Colarelli, & Hartman, 1983). As suggested by Barber et al. (1994), the uncertainties that can lead to apprehension and stress are inherent in the search process. These pressures accumulate with the progress of job search. When unemployed individuals engage in more job seeking activities, they have a greater chance of facing negative search experiences such as setbacks and rejections. In their analysis of the costs and benefits of coping, Schönpflug and Battmann (1988) suggest that new problems may emerge in the course of coping and such "after effects" of coping can become new stressors. As suggested by Vinokur and Caplan (1987),

one of the major determinants of well-being during unemployment is the experience of job search. Caplan, Vinokur, Price and van Ryn (1989) suggested that these negative job search experiences can lead to severe psychological consequences. Vinokur and Schul (1997) reported an experimental study that included training to help job seekers anticipate and build inoculation against negative search experiences.

Our repeated measures assessment of job search and distress allows us to assess the direction of the relationship across time in a within-person context. Although a repeated measures study cannot completely resolve issues of causal direction between two variables, it can provide valuable insights that can be combined with other studies to build information about the nature of the relationships of interest. To best examine the causal direction between job search and distress, we followed Zapf, Dorman, and Frese's (1996) recommendation to include a lagged predictor in both hypotheses. Because this is a daily diary study, the most logical step is to use one-day lag intervals. Given the above reasons, we purport that daily job search would increase the experienced distress through negative search experience. Hence, we hypothesize:

Hypothesis 1: Within individuals, negative search experience will mediate the relationship between job search and the next-day distress.

It is reasonable to claim that the impact of job search on well-being could be moderated by contextual factors. In this regard, Folkman and Moskowitz (2004) argued that an individual's coping effectiveness, manifested in one's well-being, may be influenced by the fit between characteristics of the context and various types of coping efforts. The fit between appraisal of controllability—the most often examined dimension in the context of coping, and the coping strategy is called the goodness of fit (Folkman & Moskowitz, 2004). According to the goodness-of-fit hypothesis, appraisal of control calls for more active problem-focused forms of coping

while appraisal of lack of control brings about passive emotional-focused coping. Problem-focused coping is considered adaptive in situations perceived as controllable while maladaptive in situations perceived as uncontrollable. Previous findings revealed that problem-focused coping strategies are associated with positive coping outcomes only when the encountered situation is perceived to be controllable (Christensen, Benotsch, Weibe, & Lawton, 1995; Park, Folkman, & Bostrom, 2001). In the job search literature, this dimension has been termed as reversibility (Leana & Feldman, 1991; Gowan, Riordan, & Gatewood, 1999) or situational control (Wanberg, 1997). Albeit bearing different names, these variables have been assessed similarly using items which pertain to the expectation to gain reemployment.

Using cross-sectional data, Wanberg (1997) found that reemployment expectations moderated the relationship between proactive job search and mental health among job seekers. More specifically, proactive job search was negatively correlated to mental health only for those who expected not to find a job if they looked for one. It is likely that those who have high expectations of becoming reemployed will experience less distress when they get actively involved in job search activities, compared to those who have low expectations of reemployment. Hence, we posit that reemployment expectation will moderate the relationship between job search and next-day distress.

Hypothesis 2: Within individuals, reemployment expectation will moderate the relationship between job search effort and next-day distress. When reemployment expectation is high, the relationship between job search effort and distress will be weaker than when reemployment expectation is low.

Reversed Relationship model

Aside from the direct relationship model, we also examined a reversed relationship model: the impact of distress on job search efforts. Coping has been widely viewed as a response to the emotion experienced by an individual during a stressful encounter (Folkman & Lazarus, 1988). Hobfoll (1988) suggested that stress-related emotions such as anxiety and depression may have a functional significance of alarming people to take action to prevent the loss of valuable resources. This argument implies that higher levels of distress could motivate people to look for a job harder. Kessler, Turner and House (1989) reported that psychological distress indices, including anxiety, depression, somatization and physical health, were all positively correlated to the future reemployment probability of unemployed individuals. Their data did not support the explanation that those who were distressed tended to accept low quality jobs. In a two-wave longitudinal survey of graduating college students, Crossley and Stanton (2005) found that the distress levels of job seekers were positively related to their reported job search success six weeks later. Even though these two studies did not include job search measures, it was suggested by these authors that psychological distress may be associated with heightened job search efforts, which could then lead to employment success. A recent study (Clark, 2003) using seven waves of the British Household Panel Survey found that those who were more psychologically hurt by unemployment were more likely to look for a new job and consequently found a job in the succeeding period. Clark (2003) also argued that psychological distress during unemployment (indicated by GHQ-12 score in that study) can serve as a proxy indicator for the utility of employment.

However, there are limits to the extent to which psychological distress is adaptive. Evidence has shown that anxiety-related thoughts may impede people's normal functioning (Folkman & Lazarus, 1988). In a longitudinal study on changes in job search behaviors, Barber et al. (1994) proposed an "emotional model" and argued that individuals will decrease their job

search efforts over time because of the accumulated distress during job search. They argued that heightened distress will trigger negative reactions such as withdrawal and avoidance (Barber et al., 1994). Job seekers may become discouraged and less motivated to engage in job search activities because negative encounters could have detrimental effects on their self-efficacy and self esteem. The above “emotional model” is similar to the “scarred model” in economics (McFadyen & Thomas, 1997), which suggests that the prolonged unemployment may lead to loss of motivation and morale of job seekers. Both these models imply that if people are too distressed, they might not be able to carry out their job search activities well. We propose that the effects of psychological distress on job search effort can be depicted by a concave-shaped graph: job search effort will increase along with psychological distress but to the rate of the increase will be reduced when the distress level is at a very high level. Thus, for the reversed relationship model, we conjecture the following:

Hypothesis 3: Within individuals, (a) job seeker’s distress will be positively related to job-search effort the following day; (b) but the relationship will be weakened when distress is at a very high level.

To examine the underlying mechanisms of the relationship between distress and next-day job search, we also propose one potential mediator, specifically job-search intentions. Behavioral intention models, exemplified by the theory of reasoned action (Ajzen & Fishbein, 1980) and the theory of planned behavior (Ajzen, 1985), maintain that an individual’s intention to perform a given behavior is the immediate determinant of the behavior. Intention is regarded as a summary of motivational factors which indicate how much effort he/she wants to exert on initiating and engaging in a particular behavior (Ajzen & Fishbein, 1980). For behaviors under volitional control, intentions are supposed to mediate the effects of other cognitive, affective, and

contextual factors in predicting behaviors (Westaby, 2005), and previous studies have supported the mediating effect of job search intention on relationships between attitudinal and normative variables and job search behavior (e.g., Song, Wanberg, Niu, & Xie, 2006; Wanberg, Glomb, Song, & Thoreson, 2005). We conjecture that job search intention can mediate the relationship between distress and job search as well. In a conceptual paper on affective experience and work motivation, Seo, Feldman Barrett, and Bartunek (2004) suggest that affect can be considered a distal motivational process which may influence behavioral outcomes through proximal motivational processes such as expectancy, utility and progress judgments. Unpleasant affect can trigger defensive action through negative outcome expectancy and negative utility judgments for these outcomes. Similarly, distress may prime unemployed individuals to think that they have a lower chance of finding a job and worry about negative consequences of a prolonged unemployment. This heightened discrepancy appraisal of loss or threat (Latack, Kinicki, and Prussia, 1995) may compel individuals to set stronger job search intention and more actively engage in job search activities to reverse the unemployment situation. Hence, we hypothesize:

Hypothesis 4: Within individuals, job search intention will mediate the relationship between end-of-day distress and job search effort the following day.

The third variable model

Lastly, we examine the possibility that the link between job search and distress is spurious due to a common relationship with a third variable. It has been suggested that the association between job search and distress can be attributed to a third factor such as economic hardship (Price, van Ryn, & Vinokur, 1992; Vinokur, Price, & Caplan, 1996; Whelan, 1992; Vuori & Vesalainen, 1999). Economic hardship was found to be positively related to both psychological distress and job search effort (Kanfer, Wanberg, & Kantrowitz, 2001; McKee-

Ryan et al., 2005; Rantakeisu & Jönsson, 2003). Nordenmark and Strandh (1999) suggested that employment satisfies an individual's economic need by providing the main economic resource in the modern society. Economic needs are critical in understanding the well-being of the unemployed, as the degree of economic hardship could stimulate job search activity (Nordenmark & Strandh, 1999). Under this explanation, unfulfilled economic needs due to job loss will increase an individual's distress level on one hand and increase an individual's job search effort on the other. A positive association between job search effort and distress will thus be observed.

Since financial concerns are arguably more apt to change on a day-to-day basis, we examined fluctuations in financial strain by including it in the daily diary surveys. New expenses or discussions about financial outlook may lead to a variety of spikes in financial concern. In our repeated measures approach, we examined the role of financial concerns as a possible third variable explanation for the association between job search effort and distress. We propose the following hypothesis based on the third variable model:

Hypothesis 5. Within individuals, the association between job search effort and distress will be accounted for by financial strain.

Method

Sample and Procedures

The study involved 100 unemployed job seekers from nine community centers in Shenyang, an industrialized city located in northeast China. The study was part of a larger effort to examine the daily family dynamics of unemployed job seekers, their employed spouses, and children. Community center employees assisted in recruiting and surveying participants. To qualify as participants for the current study, individuals had to be unemployed, have been

actively looking for a job in the past two weeks, and have the intention to look for a job in the next two weeks. Unemployed individuals who met the criteria were invited to go to their respective community centers to attend the orientation on the purposes and procedures of the study. Two researchers and fourteen applied psychology graduate students from a local university led these sessions with the assistance of the employment center workers. Among the 100 participants, 74 were females. Their mean age was 41.99 with the range from 29 to 54. Most of them had high school education (81%). Only 15% had postgraduate education. Their average unemployment duration was 2.32 years.

Subsequently, each participant was asked to complete a daily survey for 14 consecutive days including two weekends. Weekends were included since job search could happen not only during working days but also on weekends (California Job Journal, April 11, 2004). Job seekers in a focus group discussion before the formal study also confirmed that they indeed looked for jobs during weekends. The daily survey included measures of distress, job search experiences and daily stressors. In the orientation session, we strongly emphasized to the participants that they had to complete the diary surveys every day before going to bed. They were instructed to return the completed surveys to their community centers in the next morning and to collect another set of surveys to be completed later in the day. Moreover, we asked the participants to report the time when they completed each survey. Their time reports show that 93% of the surveys were completed in the evening before being submitted to the employment center the following day. These strict procedures were used to prevent major limitations of paper-and-pencil diary methods, such as unintended forgetfulness and retrospective recall error (Bolger, Davis & Rafaeli, 2003). Such procedures were not very burdensome for participants since all of them lived within walking distance from their community centers. Researchers also went to the

community centers to collect the completed surveys every afternoon. Out of 1,400 sets of surveys sent out, participants submitted 1,379 completed surveys, representing a 98.5% response rate across person and time. They were compensated for their participation (150 RMB or about 19 US dollars per family).

Daily Repeated Measures

Distress. Distress was measured by the 6-item Kessler Psychological Distress Scale (K6, Kessler et al., 2002). The K6 scale was developed for the U.S. National Health Interview Survey and has been used in several national health surveys in the United States, Australia, and Canada (Kessler et al., 2002). The original K6 inventory asks participants to report in the past 30 days how often they felt “nervous,” “hopeless,” “restless or fidgety,” “so depressed that nothing could cheer you up,” “that everything was an effort,” and “worthless.” It was also adopted in a stress and coping study (Mroczek & Almeida, 2004) to measure daily psychological distress or negative affect, and the instruction was changed into asking about one’s feelings in the past 24 hours. We used the Chinese version of the K6 provided by authors of the inventory. We asked participants to report the extent to which they experienced each of the feelings in the past 24 hours on a scale of 0 (none of the time) to 4 (all of the time). The alpha coefficient was .81.

Job search effort. Job search effort was measured by asking the total time spent (in hours) on job search activities in the past 24 hours.

Reemployment expectation. Reemployment expectation was measured using a two-item inventory developed for the current study. The first item asked participants to estimate their chances of finding a job through their job search effort. Participants responded to this question on a scale of 1 (no chance) to 5 (great chance). The second item asked participants to report their

level of optimism on finding a new job in the near future. The scale for this item ranged from 1 (very low optimism) to 5 (very high optimism). The alpha coefficient for this inventory was .63.

Job search intention. Job search intention was assessed using two items from Vinokur & Caplan (1987)—e.g., “How hard do you intend to look for a job tomorrow?” and “How likely will you look hard for a job tomorrow?”. Responses ranged from 1 (no effort) to 5 (a lot of effort) for the first question, and 1 (not at all likely) to 5 (extremely likely) for the second question. This instrument was translated into Chinese and tested by Song et al. (2006). The alpha coefficient for this scale was .81.

Two variables, *negative search experience*, and *financial strain*, were measured by items from the Unemployment Stressor Inventory (Zhang, Sun, Uy, Song, & Shi, 2007). The inventory was developed to assess different stressors associated with unemployment. Items were reworded to fit the diary format of the current study. Negative search experience was measured by two items: “I encountered difficulties today in my job search” and “I feel pressured for not having found a suitable job lead today.” The alpha coefficient for this inventory was .85. Financial strain was measured using two items: “I feel pressured by all of the family expenditures today” and “I feel the pressure of lack of money to my life today”. The alpha coefficient for this inventory was .88. Although items of negative job search experience and daily financial strain measures were not directly translated from established scales, their meanings were compatible to those frequently used in the unemployment literature (e.g., Warr, 1984). All the above items were rated on a 5-point scale ranging from 1 (strongly disagree) to 5 (strongly agree).

Although we measured demographic factors and some personal variables such as employment commitment and Time 1 job search effort in the baseline survey, it was not necessary to include the Time 1 control variables in the analyses since our major focus was the

within-person effects and we have already applied the mean-centering procedure which eliminates between-individual effects of daily predictors (Hofmann & Gavin, 1998). We thus only included daily variables in all our models.

Results

(INSERT TABLE 1 ABOUT HERE)

Table 1 displays the means, standard deviations, correlations, and reliability coefficients of the study variables (averaged across time waves). The average daily job search effort and average daily distress across 14 days were not significantly correlated ($r=.01$, *ns*). Tables 2 to 4 show the results of the hypothesis testing. Because our data consisted of multiple observations of individuals over time, a mixed model (also known as the Hierarchical Linear Model or Multilevel Random Coefficient Model) was used to test all hypotheses. Mixed models are appropriate for handling the correlated data structure of the repeated-measure data. All models were specified with random intercepts and slopes, except for the fixed effect of job search effort on next-day distress, which has a small and non-significant variance estimation (4.2×10^{-7} , t -test=.18, *ns*). Since the aim of our study is to disclose within individual variation of job search and distress over time, all time varying predictors were individual-mean centered (i.e., the average score of the individual over the research period is subtracted from each momentary report to partial out individual mean effects from the momentary assessment. Hofmann, 1997; Hofmann & Gavin, 1998). The `xtmixed` command in Stata version 9 was used to run mixed regression models (see Rabe-Hesketh & Skrondal, 2005, for an introduction to this command). Among the 1,379 returned surveys, the sample sizes (person \times day) of regressions ranged from 1,018 to 1,374, due to missing data for some questions (mainly job search effort with 249

missing data points). No significant difference was found between reports with and without missing values ($t(1366)=0.82, ns$).

(INSERT TABLE 2 ABOUT HERE)

To examine Hypothesis 1 in which the mediating effect of negative search experience was proposed, the multilevel mediating regression procedure suggested by Kenny, Korchmaros and Bolger (2003) was followed. As suggested by these authors, when effects in the indirect path are random, ordinary mediation analysis procedures, such as the popular Baron and Kenny's (1986) method, are no longer valid for testing effects of mediation. Model 1 in Table 2 indicates a significant positive relationship between job search and next-day distress ($\beta = .11, p < .05$). Using the results in Models 1 to 4, we performed the recommended statistical procedure and found that 82.8% of the overall effect of daily job search effort on next-day distress was mediated by negative search experience. Thus, Hypothesis 1 was fully supported.

In Hypothesis 2, we proposed that reemployment expectation will moderate the within individual relationship between job search effort and next-day distress. We included a main effect of reemployment expectation and its interaction with job search effort in Model 5. As demonstrated in Table 2, the main effect of reemployment expectation was significant and negative ($\beta = -.19, p < .01$). The interaction term was negative, which is consistent with Hypothesis 2. However, the coefficient was not significant ($\beta = -.06, ns$). Hence, Hypothesis 2 was not supported.

(INSERT TABLE 3 ABOUT HERE)

For Hypothesis 3a, we posited that end-of-day distress will be positively related to job search effort the following day. Results in the first model in Table 3 showed significant positive beta coefficients for the relationship between daily distress and next-day job search effort ($\beta = .07, p < .01$), thus lending support for Hypothesis 3a. In the second model, the square term for daily

distress was included to represent the nonlinear effect of distress. There is no indication that there exists a nonlinear effect of distress ($\beta = .00$, *ns*). Thus, Hypothesis 3b was not supported.

For Hypothesis 4, we proposed that within individuals, job search intention will mediate the relationship between distress and the next-day job search effort. The job search intention significantly predicted the next-day job search effort as shown in Model 3 of Table 3 ($\beta = .09$, $p < .01$). However, the inclusion of intention in the model resulted no decrease in the effect size of distress ($\beta = .07$, $p < .01$). Also the fourth model indicates that daily intention was not significantly related to daily distress ($\beta = .03$, *ns*). Because our analyses revealed that both daily distress and job search intention had random effects, the method recommended by Kenny et al. (2003) was used to conduct mediation analysis. Job search intention only explained 4.8% of the variation of the effect of daily distress on next-day job search effort. Thus, Hypothesis 4 was not supported.

(INSERT TABLE 4 ABOUT HERE)

In the last hypothesis, we posited that within individuals, the relationship between job search and distress can be explained by a third variable--financial strain. We included financial strain in both models of job search and distress. Results in Table 4 demonstrate that financial strain was significantly correlated with the next-day distress ($\beta = .21$, $p < .01$) but not with the next-day job search ($\beta = .03$, *ns*). The inclusion of financial strain did not decrease the effect sizes of job search ($\beta = .10$, $p < .05$) or distress ($\beta = .06$, $p < .01$). Thus Hypothesis 5 was not supported.

As a robustness check, we included a lagged dependent variable in all mixed models to further control the serial dependency. With the inclusion of a lagged daily distress, the effect of daily job search effort on next day distress was no longer significant (see the first model in Table 5). However, when we used a less stringent approach which models job search as a predictor of the same-day distress while controlling for previous-day distress, the effect of job search

remained significant (see the second model in Table 5). As for models of job search effort (the third model in Table 5), inclusion of a lagged job search effort as a predictor did not change the significant effects of daily distress. Overall, the robustness check supports both the direct and reversed relationships between job search and distress.

Discussion

Using the daily repeated measures design, we examined the dynamic relationship between job search and distress over time from a within-individual perspective. Three models—the direct relationship model, the reversed relationship model and the third variable model—were proposed and empirically tested in this study. Results offered support for both the direct relationship model and the reversed relationship model. The third variable model was not supported. Additional potential moderating and mediating variables supplementing the direct and reversed relationship models were also tested.

We found that job search effort was positively related to next-day distress. This suggests that job search activities can be a source of distress for the job seeker, which is consistent with the argument that job search can be a potential stressor for unemployed individuals (Fielden & Davidson, 1999; Waters, 2000). Results of the mediating regression analyses support the assumption that negative job search experience mediates the relationship between job search effort and the next-day distress. The robustness check supports the direct relationship model but suggests that job search has a direct influence over the same day distress which then influences the next-day distress.

Job search has been conceptualized and tested as a coping behavior that directly addresses the cause of distress for the unemployed. Meta-analytic evidence supported a positive relationship between job search and reemployment (Kanfer et al., 2001), and reemployment has

often been associated with improved well-being. However, the current study demonstrated the side effect of job search effort in the short run: more job search effort may increase the chances of negative encounters such as rejections and these negative job search experiences will heighten the distress levels of job seekers. Job search guidance books (e.g., Minnesota Department of Economic Security, 2001) often advise job seekers to put consistent effort in job search and treat it as a full time endeavor. However, only a few have provided tips on how to deal with negative encounters in job search and how to handle psychological distress induced by job search. Findings from our study imply that practical suggestions must be given to job seekers on how to deal with negative job search experiences, as failure to do so would be detrimental to the unemployed individuals' well-being. Caplan et al. (1989) reported the positive impact of a group-discussion-based intervention program, including training of resistance towards setbacks during job search, to unemployed job seekers. This program not only helped decrease psychological distress, but also helped increase job search efficacy and motivation of unemployed job seekers. Those who participated in training sessions were also more likely to be reemployed and got better pay than those who did not in follow up surveys conducted one and four months later. Although this study could not confirm which components of the program (i.e., job search skills, motivation, inoculation against setbacks and social support) account most for the positive interventional results, it still suggests the potential benefits of having training on how to handle negative job search experience on top of interventions targeted at enhancing job search skills and motivation.

As for the reversed relationship model, findings demonstrate that distress experienced at the end of the day is associated with higher levels of job search effort the following day. This effect was still significant in the robustness check when a lagged job search effort was included

in the regression. These results suggest that distress may have a short-term motivating effect on job search efforts. Heightened distress experience may trigger individuals to engage in behaviors that can address the problem. In the unemployment situation, job search is the behavior that is commonly viewed as adaptive as it involves directly tackling the issue at hand. Our finding is contradictory to the “emotional model” of job search proposed by Barber and colleagues (1994), which suggests a negative relationship between job search and distress. Based on our results, daily distress led to an increase in the following day’s job search effort, and this relationship was observed even when the distress levels were high. It is possible that the debilitating effect of distress on job search does not manifest itself on a day-to-day basis, and a longer period may be required for the negative effect of distress on job search to unfold.

The mediating effect of job search intention on this relationship was not supported: distress was not significantly related to job search intention and the influence of distress on job search was independent of the effect of intention. This suggests that the influence of distress on the next-day job search is not through a rational and planned channel. It is possible that job search activities triggered by distress are relatively haphazard and less systematic. Côté, Saks, and Zikic (2006) found that positive affectivity increased job search intensity through job search clarity. This finding suggests that positive affect motivates job seekers to engage in more systematic and planful job search effort while negative affect (or distress, in the case of the current study) motivates less systematic job search effort. Since we did not have measures of quality and willfulness of job search in the current study, this remains a speculation. Future studies can examine both planful and nonplanful processes that drive job search effort and compare their respective influences on reemployment outcomes.

We did not find supporting evidence for the third variable model, as financial strain, our proposed third variable, did not account for the relationship between job search and distress. The daily financial strain was positively correlated with the next-day distress, but not the job search effort. These findings suggest that daily financial strain may have a detrimental effect on well-being but do not necessarily motivate individuals to engage in proactive job search behaviors on a day-to-day basis.

Based on the findings from our study, we can infer that the relationship between job search and distress is not unidirectional, but reciprocal. Combining the evidence that support both direct and reversed models, we seem to observe a vicious cycle: a high level of distress leads to more job search, and more job search leads to a high level of distress. Since high levels of distress could have negative effects on the performance of job seekers in job interviews and tests (McCarthy & Goffin, 2004), this may leave negative impressions to prospective employers and consequently decrease their chances of getting a new job. They may even lose heart and as a result quit job search. However, we can also look at this relationship from a more encouraging perspective: more job search leads to high levels of distress, and high levels of distress could possibly motivate individuals to look for a job harder. As more job search effort is associated with higher chances of getting a job (Kanfer et al., 2001), job seekers may eventually pull themselves out of the negative unemployment situation. The model of conservation of resources (Hobfoll, 1988; 1989) highlights the role of personal resources in the coping process. Those with weak resources are less likely to handle stressful events and daily challenges well and are more likely to fall into the vicious cycles which further deplete their resources. On the other hand, those with strong resources are better equipped to deal with stressful events and daily challenges, and are more likely to gain from the coping process (Hobfoll & Lilly, 1993). There is evidence to

show that dislocated workers with fewer resources (i.e., older age, low education and in a declining industry) tend to face more difficulty in finding a new job than those with more resources (Sandell & Baldwin, 1990). It is a promising direction for future studies to examine contextual and dispositional resources such as money, family support and self-esteem that can explain whether individuals will experience a constructive or destructive job search process.

Moreover, outplacement services can provide support and increase the job seeker's coping resources through activities such as job search workshops, interview training, relocation assistance, job training, career planning and financial planning (Kozlowiski, Chao, Smith, Hedlund, 1993). There are evidences that show outplacement services can lead to better employment outcomes (Vinokur, van Ryn, Gramlich, & Price, 1991), more career growth opportunities (Leana & Feldman, 1989), and improved mental health (Caplan et al., 1989) for displaced workers. Future research should also examine whether receiving outplacement services would alter the relationship between job search behavior and distressful reactions.

In this study we collected information of job search and distress on a daily basis. A relevant question is whether the daily dynamic relationship between job search and distress depicted in the study will still hold if longer time frames (e.g., weeks or months) were used. In the work stress literature, there is a so-called sleeper effect which suggests that psychological symptoms may require a longer time frame to be observed (Grebner, Semmer, & Elfering, 2005). Job search is a process that unfolds over time (Barber et al., 1994), and it often involves different activities such as information seeking and interviewing which could last for several months. When job seekers become frustrated with finding a job over time, they tend to rely less on informal sources to find jobs since informal sources require a great deal of social skills and self-confidence (Barber et al., 1994). Another study (Frese, 1987) also indicated if the unemployed

job seeker cannot find a job after a long period of time, the effect of reemployment expectation can become dysfunctional. It is possible for those with high reemployment expectation but have been unemployed for quite a long time to become more distressed when they engage in more job search. Since the current study only covers a two-week time span of the experiences of unemployed job seekers, we were only able to test short term, day-to-day effects. As suggested by Larson and Almeida (1999), studies that use microscopic time frames can address questions about dynamic relationships different from those using macroscopic time frames. Therefore, it would be meaningful for future studies to examine long term effects of job search on distress over several weeks and months.

The literature on unemployment and well-being suggests that the distress levels are not stable during the unemployment period (Brenner, & Levi, 1987). Borgen and Amundson (1987) described the unemployment experience as an “emotional roller coaster”, as the whole cycle of an individual’s reaction to job loss includes several stages: denial, anger, bargaining, depression, acceptance, enthusiasm, stagnation, frustration, and apathy. Individuals may start from the denial stage and just carry on with a positive outlook, but as they come into grips with the painful reality of job loss, their positive emotions may take a dive as they go through the stages of anger, bargaining, and depression. Their positive emotions may go up again as they conduct their job search activities with hope and enthusiasm. If they cannot find a job soon, they may lose hope and experience stagnation and frustration. As unemployment gets prolonged, apathy may set in as people start feeling hopeless about the situation and decide to give up on job search. Such interplay between a person’s emotions and personal life situations was well documented in a case study (Firth-Cozens, 1992). Moreover, affect can influence behavioral responses through outcome expectancy judgment (Seo et al., 2004). Negative affectivity (NA) can play important

roles in the stress and coping processes of the unemployed (George & Brief, 1996). Findings in the general stress-coping area (e.g., Bolger & Zuckerman, 1996) showed that those with high NA tend to respond to stressors differently from those with low NA. Spector, Zapf, Chen, and Frese (2000) provided several mechanisms for NA to relate to job stressors and strains. For example, they suggest that those in high NA tend to perceive the world in a more negative way and exaggerate strain response to stressors. Because of this, they tend to get selected for more stressful jobs and create adverse circumstances. It is then reasonable to expect that job search can lead to different levels of distress for those with high NA versus those with low NA. Future research can examine the ebb and flow of affect and job search using appropriate methodologies such as the experience sampling method (Larson & Csikszentmihalyi, 1983).

This study was conducted in China, and the findings should be read with caution when extending to other countries. As suggested by Price et al. (2006), although there are some psychological effects of unemployment that are common to both Chinese and Western societies, Chinese culture and historical events, such as the Cultural Revolution, may uniquely shape unemployment experiences of Chinese job seekers. A recent empirical study (Song et al., 2006) also indicated that unique employment policies in China (e.g., government sponsored extensive job search program for older job seekers) can change job search motivation and effectiveness of unemployed individuals. Furthermore, China only established its labor market recently (Knight & Song, 2005). Most unemployed job seekers lack marketable skills and have relatively few job search experiences. Many of them have to rely on government support to find new jobs in a highly competitive job market. These internal and external situations are experienced by millions of unemployed job seekers in China, but may be different from those in developed countries. Nonetheless, the labor market in China shares many similarities with those of transitional or

developing economies (e.g., Eastern Europe, India and Latin America) such as a strong informal sector and widespread noncompliance with regulations (Harrison & Leamer, 1997). Our study provides a good starting point for future work on job search behaviors in emerging economies.

One limitation of the study was the under-representation of male job seekers in the sample. A couple of other studies that collected data in the same city also had unemployed samples with similar gender configuration (Zhang et al., 2007; Zhang, Zheng, Sun & Zhao, 2005). Through the discussions with employment workers in the community centers who had assisted the recruiting process, we were informed that unemployed men were more likely to engage in informal employment, thereby disqualifying them from the study. Future studies should explore other recruiting strategies to achieve a gender balanced sample.

Another limitation is the measurement of job search effort. We used the amount of time in a day devoted to job search to represent the job search effort. This measure does not differentiate effects of different job search activities, such as information seeking, interviewing and networking. It is possible that some job search activities are more stressful than others. For example, Barber et al. (1994) suggests that seeking job leads from informal sources are more stressful than from formal sources. Job interviews can be very stressful because the process is beyond the control of the interviewee and the interviewer is typically a stranger to the interviewee (McCarthy and Goffin, 2004). Future studies can include more refined job search measures to directly compare differential effects of individual job search activities.

Although we tried to launch a comprehensive examination of the job search and distress relationship by testing alternative models and an array of relevant moderators and mediators, our study has not exhausted all possibilities. The role of reemployment expectations can be more complex than what we have modeled in the current study. As we mentioned in a previous section,

depending on the time frame of the research, reemployment expectations can either strengthen or weaken the relationship between job search and distress. It is also possible for reemployment expectations to mediate the relationship between distress and job search intention and job search effort. Future investigations can test models that incorporate potential moderators of the job search and distress relationship such as job search clarity (Côté et al., 2006), coping goals (Latack et al., 1995), and action-state orientation (Song et al., 2006). With larger sample sizes, future studies can also examine how demographic variables, such as gender and unemployment duration, moderate this relationship¹.

Notwithstanding our efforts in strictly urging all our participants to comply with the study protocol of completing the surveys at the end of the day before going to bed and returning the surveys the following day, it still does not rule out the possibility that some of them actually completed the surveys in the morning when these surveys were due and failed to report their completion times accurately. Even though we do not consider this a severe problem that could have distorted our findings substantially, we do recognize this as an inherent limitation of paper-and-pencil diary studies. Therefore, future diary studies should use electronic methods that accommodate a more objective way of recording time stamps to verify compliance.

Despite the limitations, the current study was able to shed light on the dynamic relationship between job search and distress using a more rigorous method that allowed for a within-person examination of the changes in the relationship over time. It is hoped that this study has advanced the wealth of knowledge in the field of job search as well as in the stress and coping research.

¹ We tested whether gender and unemployment duration moderated the relationship between daily job search and distress but did not find any significant effect. Nonetheless, it is possible that the relatively small sample size prevented us to find significant moderating effects.

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Table 1
Mean, standard deviation and the correlation matrix of study variables

	Mean	SD	1	2	3	4	5	6
1. Average daily job search effort	3.01	1.90	--					
2. Average daily distress	9.35	2.55	.01	--				
3. Average daily reemployment expectation	5.80	1.25	.19	-.07	--			
4. Average daily negative search experience	6.88	1.44	.25	.50	-.07	--		
5. Average daily financial strain	7.86	1.35	.14	.40	.06	.75	--	
6. Average daily job search intention	5.86	1.36	.56	.25	.47	.43	.38	--

Note. N=100. Correlation coefficients larger than .19 are significant at the .05 level. Correlation coefficients larger than .25 are significant at the .01 level.

Table 2

Testing the direct relationship model: Relationships between job search effort and next-day stress

Variable	Next-day distress (Model 1)		Next-day distress (Model 2)		Daily negative search experience (Model 3)		Next-day distress (Model 4)		Next-day distress (Model 5)	
	b	se	b	se	b	se	b	se	b	se
Daily job search effort	.11	(.05)*			.11	(.04)**	.07	(.05)	.11	(.05)*
Daily reemployment expectation									-.19	(.08)**
Daily job search effort × Reemployment expectation									-.06	(.05)
Daily negative search experience			.14	(.06)*			.19	(.06)**		
Variance of the job search slope	--				.05	(.02)				
Variance of the negative search experience slope			.08	(.04)			.03	(.03)	.11	(.07)
N	1033		1256		1126		1031		1020	
-log likelihood	2316.18		2797.32		2021.95		2304.51		2290.00	

* p<0.05; ** p<0.01,

Table 3

Testing the reversed relationship model: Relationship between daily stress and next-day job search effort

Variable	Next-day job search effort						Daily job search intention	
	(Model 1)		(Model 2)		(Model 3)		(Model 4)	
	b	se	b	se	b	se	b	se
Daily distress	.07	(.03)*	.06	(.03)*	.07	(.03)*	.03	(.03)
Daily distress square			.00	(.01)				
Daily job search intention					.09	(.04)**		
Variance of the distress slope	.02	(.01)	.02	(.01)	.02	(.01)	.02	(.01)
Variance of the intention slope					.03	(.01)		
N	1029		1029		1029		1374	
-log likelihood	1893.76		1897.87		1888.00		2517.51	

* p<0.05; ** p<0.01

Table 4

Testing the third variable model: Effects of daily financial strain on the relationship between daily job search effort and stress

Variable	Next-day distress (Model 1)		Next-day job search effort (Model 2)	
	b	se	b	se
Daily job search effort	.10	(.05)*		
Daily distress			.06	(.03)*
Daily financial strain	.21	(.06)**	.03	(.04)
Variance of the distress slope			.02	(.01)
N	1018		1027	
-log likelihood	2282.75		1892.08	

* p<0.05; ** p<0.01,

Table 5
Robustness check with lagged dependent variables

Variable	Next-day distress (Model 1)		Next-day distress (Model 2)		Next-day job search effort (Model 3)	
	b	se	b	se	b	se
Daily job search effort	.02	(.05)			.03	(.04)
Next-day job search effort			.10	(.04)*		
Daily distress	.31	(.05)**	.24	(.05)**	.07	(.03)*
Variance of the distress slope	.08	(.03)	.06	(.02)	.02	(.01)
N	1020		1019		937	
-log likelihood	2238.24		2238.57		1713.77	

* $p < 0.05$; ** $p < 0.01$,