AFTER THE PINK SLIP: APPLYING DYNAMIC MOTIVATION FRAMEWORKS TO
THE JOB SEARCH EXPERIENCE

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In late 2008, the U.S. and much of the industrialized world entered a recession, resulting in significant job loss across the globe. While unemployment is an issue of particular salience in today’s financial climate, the topic has attracted steady research attention dating back to the Great Depression and throughout the varying economic climates that have followed since then (see, for example, Fryer & Payne, 1986; Hanisch, 1999; Paul & Moser, 2009). From an individual perspective, the loss of a job produces the need to find new employment and leads to, for many people, heightened anxiety and depression stemming from issues such as feelings of betrayal toward the previous employer, concerns about how to manage financially, and uncertainty about the future (McKee-Ryan, Song, Wanberg, & Kinicki, 2005; Murphy & Athanasou, 1999).

It is hardly surprising then, from an individual or psychological perspective, that two of the most central and highly studied constructs examined within the job loss literature are job-search intensity and job-seeker mental health. Job-search intensity refers to the amount of time or effort individuals spend on their job search. Search intensity has been portrayed as an essential coping behavior for unemployed individuals who wish to find work (Prussia, Fugate, & Kinicki, 2001); meta-analytic data shows that individuals who put more time into their job searches tend to find work more quickly (Kanfer, Wanberg, & Kantrowitz, 2001). Mental health refers to individuals’ emotional and psychological well-being (Ware, Manning, Duan, Wells, & Newhouse, 1984). Although there are variables that predict higher versus lower adjustment during unemployment, meta-analytic data suggest that experiencing unemployment is associated
with poor mental health as well as stress-related physical symptoms such as headaches and stomachaches (McKee-Ryan et al., 2005; Murphy & Athanasou, 1999).

Over the past three decades, there has been increasing interest in the application of social-cognitive and self-regulation theories for understanding the experience of unemployment. Early studies focused on the role of job-search self-efficacy and the benefits of self-management training for helping persons find reemployment (e.g., Azrin, Flores & Kaplan, 1975; Caplan, Vinokur, Price, & Ryn, 1989; Kanfer & Hulin, 1985). In 2001, Kanfer et al. proposed a motivational, self-regulatory conceptualization of the job search process to organize and investigate the impact of individual differences in person characteristics and job-search behaviors on employment outcomes. In this conceptualization, job-search behaviors were posited to reflect a self-regulatory process in which individuals self-organize and manage their cognitions, affect, and behaviors over time for the purpose of obtaining reemployment. For most persons, job search occurs in a highly autonomous, ill-defined, and loosely structured environment. During the task of finding employment, individuals must identify, monitor, and change their search strategies and behaviors, manage feelings of discouragement, and sustain search efforts based on incomplete data and the absence of regular, developmental feedback.

Recent studies provide support for the viability of the self-regulation approach to the study of job search behavior (Creed, King, Hood, & McKenzie, 2009; Van Hoye & Saks, 2008; Zikic & Saks, 2009), including a study that applied self-regulation theory to the examination of the dynamics of job search from day to day over a three week time frame (Wanberg, Zhu, & Van Hooft, in press). Kanfer (2002) and Latack, Kinicki, and Prussia (1995) also recognize self-regulatory frameworks as valuable for examining how individuals psychologically adjust and respond to the unemployment experience, but self-regulatory frameworks have rarely been
applied to the study of well-being during unemployment (for an exception see Niessen, Heinrichs, & Dorr, 2009).

In this paper, we propose and test a self-regulatory framework focused on understanding the dynamics of job-search intensity and mental health over the first several weeks of unemployment. We use a repeated measures design, surveying newly unemployed individuals once per week for a total of twenty weeks or until the individual is reemployed. Through the lens of our proposed theoretical framework and this repeated measures design, we examine relationships pertaining to the role of motivational traits (i.e., approach- and avoidance-trait motivation) and self-regulatory states (i.e., motivational control and self-defeating cognition) in predicting job-seeker search intensity and mental health over the multiple weeks of our study. Although our hypotheses for the most part focus on our search intensity and mental health, we also assess the distal job-search outcomes of our participants including reemployment speed and number of interviews due to the ultimate importance of these search success indicators.

Our study seeks to make both a theoretical and empirical contribution. From a theoretical standpoint, our framework develops new ideas regarding the proposed interplay between motivational traits and self-regulatory states and the process by which these may affect the job loss experience within a temporal context. Unlike previous applications of self-regulation theory to unemployment, our proposed model emphasizes process, integrates a full portfolio of outcomes including not only job-search but also mental health and distal search outcomes, and importantly, proposes and tests temporal-based hypotheses over the first several weeks of a newly unemployed individual’s job search. Saks (2005) and Wanberg et al. (in press) have argued that the study of the dynamics of the unemployment experience is valuable, and that it is necessary to translate and develop theoretical frameworks that are suitable to capture what
happens within the job search process over both long (e.g., week to week and month to month) and short periods (e.g., day to day). *Empirically,* we put forth the most comprehensive repeated measures investigations within the job loss domain that we know of to date. Our repeated measures design provides new information about the two central constructs of our study (job search and mental health) with regard to how these variables manifest themselves over the duration of the unemployment experience and with respect to antecedents and process. Notably, our study also provides an empirical contribution to the self-regulation literature. Dalal and Hulin (2008) argue that dynamic data on self-regulatory processes is rare, but essential to advance theory and to understand motivational outcomes at a suitable complexity. In a recent review, Ployhart (2008) notes that “… for most real-world problems…[what]we care about [is] the manifestation of motivation in some sustained way” (p. 54).

Our conceptual model is shown in Figure 1. In the following sections, we describe the components of this model.

**Motivational Traits**

Theorizing by Dweck (1986), Higgins (1998), Elliot and Thrash (2002), Kanfer and Heggestad (1997), and VandeWalle (1997) posit the existence of two distinct motivational orientations that exert differential effects on self-regulatory activities and performance. Individuals high in what is variously termed approach, promotion, learning, or personal mastery orientation are posited to engage in goal striving for the purpose of personal growth and developing competencies. In contrast, individuals high in what is variously termed avoidance, prevention, performance, and anxiety-related motivational orientation are posited to engage in goal striving for the purpose of avoiding failure, preserving resources, protecting self-concept, preventing emotional disruption of action, and fulfilling one’s obligations. The first path in our
proposed model examines the relationship between motivational traits (under the label of approach and avoidance motivation) and job-search intensity and mental health within the temporal-based context of the first 20 weeks of unemployment.

**Motivational Traits ➔ Search Intensity.** Research has been fairly consistent suggesting that individual differences in approach-oriented motivational traits are associated with enhanced performance outcomes (Galinsky, Leonardelli, Okhuysen, & Mussweiler, 2005; Liberman, Molden, Idson, & Higgins, 2001; Payne, Youngcourt, & Beaubien, 2007; Porath & Bateman, 2006). For example, Hinsz and Jundt (2005) found that higher levels of approach motivation (assessed in this context via the construct of personal mastery and competitive excellence) were associated with stronger goal commitment and performance on an idea-generation task. Specific to the job-search context and viewing job-search intensity as a measure of performance, Creed et al. (2009) found that higher levels of approach orientation (assessed in this context via the related construct learning orientation) on the part of job seekers was related to higher levels of job-search intensity measured four months later.

In this study, we extend the examination of approach orientation as an individual difference predictor of performance outcomes by examining time spent in job-search over several weeks, consistent with a dynamic conceptualization of self-regulation. We expect that individuals with higher levels of approach orientation, due to their tendency to set high standards for performance, will report higher levels of search intensity at the start of the unemployment experience. We further expect, due to their constructive interpretation of failure and ability to persist, that individuals with higher levels of approach orientation will report higher levels of search intensity across the duration of their unemployment experience. We propose:
Hypothesis 1a) Approach-oriented trait motivation will be positively related to higher levels of job search intensity at the start of the unemployment experience.

Hypothesis 1b) Approach-oriented trait motivation will be positively related to higher levels of job-search intensity across the unemployment experience.

With regard to avoidance orientation, research has been somewhat less consistent but has suggested that avoidance orientation tends to hinder performance outcomes. In a meta-analysis of available studies, Payne et al. (2007) found an estimated true mean correlation of -.13 and -.01 between two measures of avoidance orientation and task performance. Within the context of job search, Creed et al. (2009) found that higher levels of avoidance orientation (e.g., assessed in this context as performance-prove and performance-avoid orientation) on the part of job seekers were not related to levels of job-search intensity measured four months later. The across time orientation of our study, however, provides a deeper context within which to study the role of avoidance motivation and performance. Dalal and Hulin (2008) noted that most available studies of self-regulation have focused on static snapshots of behavior at one point in time, appropriate for fields of study at earlier stages. These authors suggest, however, that dynamic studies that examine distributions of behavior over time are theoretically better suited to match motivational constructs that may have negative consequences for persistence in behavior. Our expectation is that individuals with higher levels of avoidance orientation may be able to begin their job search with performance motivation reflected through more time spent in search. Over time, as the negative consequences of unemployment become more salient, we expect that individuals high in avoidance orientation will show greater responsiveness to the changing context than individuals low in avoidance orientation. Specifically, for individuals high in avoidance orientation, the failure to find reemployment over time is expected to increase disruptive affect.
(e.g., anxiety) and cause a shift in resource allocations away from job search and toward regulatory processes directed toward controlling disruptive emotions. We propose:

_Hypothesis 2) Avoidance motivation will be associated with a decline in job search intensity (i.e., a negative slope as opposed to a zero or positive slope) across the unemployment experience._

**Motivational Traits \(\rightarrow\) Mental Health.** To date, the impact of motivational traits on affect during goal striving has been largely limited to the study of task-related variables such as performance satisfaction and self-efficacy. Nonetheless, emerging literature suggests that individual differences in motivational traits may exert influence on both immediate and longer-term affective states, such as mental health (e.g., Carver & White, 1994). Strauman (2002), for example, describes depression as a failure of the self-regulatory system; he proposes that individuals who have difficulty pursuing promotion goals (i.e., making good things happen, fulfilling personal aspirations) and instead emphasize prevention goals (i.e., keeping bad things from happening, emphasizing obligations and fulfilling duties) are at risk for lower well-being. Dykman (1998) found that individuals higher in validation seeking were more likely to become depressed when encountering stressful events than individuals higher in growth seeking. Another study found that high levels of workload were associated with frustration for individuals with higher avoidance orientation but less so for individuals with an approach orientation (Whinghter, Cunningham, Wang, & Burnfield, 2008). In the salient and emotionally demanding job loss-job search context, it is reasonable to expect that approach and avoidance tendencies may exert influences that are reflected in levels of well-being. First, we expect that individuals with higher levels of approach orientation, due to their focus on personal growth and opportunity, will report
higher levels of well-being at the start of the unemployment experience as well as across the
duration of their unemployment experience.

Hypothesis 3a) Approach-oriented trait motivation will be related to higher levels of
mental health at the start of the unemployment experience.

Hypothesis 3b) Approach-oriented trait motivation will be related to higher average
levels of mental health across the unemployment experience.

Our expectation with regard to avoidance motivation highlights the temporal nature of
our data set. Specifically, our expectation is that individuals with higher levels of avoidance
orientation will show lower levels of mental health from the start of the unemployment
experience and across the unemployment experience as a consequence of their higher levels of
apprehension, worry, and anxiety related to losing employment. In addition, these individuals are
also expected to show greater sensitivity to the negative consequences of unemployment that
accrue over time, manifest via a decline in mental health over the course of job search. We
propose:

Hypothesis 4a) Avoidance-oriented trait motivation will be related to lower levels of
mental health at the start of the unemployment experience, and will be negatively
associated with the slope of mental health across the unemployment experience.

Hypothesis 4b) Avoidance-oriented trait motivation will be related to lower levels of
mental health across the unemployment experience.

Motivational Traits → Self-Regulation → Search Intensity and Mental Health. Our
proposed model also aims to gain insight into process. Going beyond how our focal variables
(job search intensity and mental health) manifest over time and relate to motivational traits, our
theoretical model includes self-regulatory states to produce insight into the why behind potential dynamics in search intensity and mental health.

Based on Kanfer and Heggestad (1997) and Wanberg, Kanfer, and Rotundo (1999), we suggest two self-regulatory states (motivational control and self-defeating cognitions) mediate the relationship between motivational traits and search intensity and mental health. These states reflect distinct self-regulatory responses to situations that are challenging, frustrating, discouraging, or that require persistence. In the context of the experience of unemployment, motivational control refers to a self-regulatory state characterized by the intentional redirection of attention (e.g., through means such as goal setting or environmental management; Kanfer & Heggestad, 1997) back toward job search activities and/or increasing the intensity of job search behaviors. In contrast, self-defeating cognitions refer to a self-regulatory state characterized by the presence of negative self-thoughts that disrupt or impede job search activities and behaviors, a likely result of individuals’ inability to sufficiently modulate negative emotions (low emotional control). In contrast to motivational control states, in which the individual is actively engaged in increasing task effort, self-defeating cognitions signal a motivational state in which the individual has insufficient control over negative, disruptive emotions.

In establishing mediation, we first expect that approach and avoidance orientations, as trait-based constructs, will be related to differential state-based displays of self-regulation (i.e., motivational control and self-defeating cognition as an index of low emotional control) across the first several weeks of the unemployment experience. A few studies from other contexts have examined relevant relationships. In a longitudinal study of sales performance, Porath and Bateman (2006) found that salespeople with higher learning goal orientation reported higher levels of three types of self-regulatory skill--proactive behavior, emotional control, and social
competence. Performance-avoid orientation was not related to self-regulatory tactics in that study. In a context specific to job search, Creed et al. (2009) found that learning orientation, but not performance-avoid orientation, was related to three self-regulation strategies (emotion control, motivation control, and work commitment). In a recent meta-analysis (Payne et al., 2007), learning goal orientation was negatively associated with state anxiety while performance goal orientation was positively associated with state anxiety (ks = 16, 7, estimated true mean correlations = -.09, .31, respectively). While support for the relationship between avoidance orientation and self-regulatory states has not been as strong in the few studies that are available, we propose that the relationship will be more likely evidenced over the multiple waves of our study as the unemployment experience continues and individuals have repeated opportunities to engage in self-regulation (Dalal & Hulin, 2008). In summary, we expect to observe the following relationships between approach motivation (Hypothesis 5a) and avoidance orientation (Hypothesis 5b) and self-regulatory states.

**Hypothesis 5a:** Higher levels of approach motivation will be associated with higher average levels of motivational control and lower levels of self-defeating cognition across the unemployment experience.

**Hypothesis 5b:** Higher levels of avoidance motivation will be related to lower average levels of motivational control and higher levels of self-defeating cognition (lower levels of emotion control states) across the unemployment experience.

In establishing the mediation proposed by our model, it is necessary to also examine the relationships between the self-regulatory states included in our study (motivational control and self-defeating cognition) and our focal outcomes (search intensity and mental health). First, with regard to motivational control, findings in the goal orientation and goal setting literatures (see
e.g., Kozlowski & Bell, 2006; Lee, Sheldon, & Turban, 2003) suggest that higher levels of motivational control are associated with higher levels of performance. Within the job-search context, Wanberg et al. (1999) showed that motivational control was positively associated with job-search intensity both at the same point in time and over time, where job-search intensity was measured three months later. To date, the impact of motivational control has been studied almost exclusively in terms of performance. In this study we extend the research to examine the relationship between motivational control and self-defeating cognition and mental health during the unemployment experience. We propose:

**Hypothesis 6a:** During weeks when individuals exert more motivational control, we expect their job-search intensity to be higher, compared to weeks when they exert less motivational control.

**Hypothesis 6b:** During weeks when individuals exert more motivational control, we expect their mental health to be higher, compared to weeks when they exert less motivational control.

We further examine the relationships between self-defeating cognitions and search intensity and mental health. Although the effects of self-defeating cognitions on performance have yet to receive substantial attention in the work literature, Porath and Bateman (2006) reported that individuals with lower levels of emotional control had lower sales levels six months later. Research also suggests that the co-activation of negative cognition or affect with goal-directed activity can reduce or even stop goal-directed effort (Aarts, Custers, & Holland, 2007). Low emotion control states such as self-defeating cognitions have been more solidly associated with negative mood states that play a key role in outcomes related to well-being (Beck, 1972, 1987; Judge & Locke, 1993). Dysfunctional thought processes, including a broad array of
negative cognitive styles, negative self-attributions, and self-defeating cognitions, have been shown to undermine self-worth (Kuiper, Olinger, & Swallow, 1987) and to diminish individual levels of well-being (Judge & Locke, 1993; Moilanen, 1993; Petrocelli, Glaser, Calhoun, & Campbell, 2001). Based upon this literature we propose:

Hypothesis 7a: During weeks when individuals report higher levels of self-defeating cognition, job-search intensity will be lower than in weeks when they report lower levels of self-defeating cognition.

Hypothesis 7b: During weeks when individuals report higher levels of self-defeating cognition, mental health will be lower than in weeks when they report lower levels of self-defeating cognition.

In summary, we propose that the relationship between the motivational traits included in our model (approach and avoidance motivation) and job-search intensity and mental health will be mediated by self-regulatory states (specifically motivational control and self-defeating cognition).

Hypothesis 8: The relationship between approach and avoidance motivation and search intensity and mental health will be mediated by motivational control and self-defeating cognition.

Search Intensity and Mental Health → Job-Search Success

Because of the ultimate importance of search success to job seekers, we also examine within this research two indicators of job-search success (number of interviews and reemployment speed). Search intensity has been studied as a predictor of job-search success more frequently than has mental health. A meta-analysis by Kanfer et al. (2001) suggests job-search intensity is a positive predictor of later employment status ($r_c = .21$, $k = 21$), number of
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offers ($r_c = .28, k = 11$), and a negative predictor of unemployment duration ($r_c = -.14, k = 9$).

Vinokur and Schul (2002, p. 72) suggest the intensity of a person’s job-search behavior is a “necessary condition” for reemployment to occur. Employers can assess the job seeker’s skills, qualifications, and other characteristics only if a job seeker contacts them. The more intensive one’s search behaviors are and the more time spent on search, the more employers potentially have the job seekers information brought to their attention. Based upon this literature, we expect that search intensity (i.e., hours spent on job search) is positively related to success in getting interviews, measured by average number of interviews per week during the unemployment spell, as well as reemployment speed.

Hypothesis 9: Job search intensity at the start and across the duration of the unemployment experience will be positively related to success in getting interviews and reemployment speed.

While there are hundreds of articles addressing mental health during unemployment (e.g., examining questions such as how unemployment affects mental health), there is surprisingly less research that has addressed mental health as a predictor of job-search success. Theoretically, authors have argued that low mental health will act to slow reemployment because depressed mood deprives job seekers of the mental and physical energy needed to engage in an effective job search (Viinamäki, Koskela, & Nishanen, 1996). One of the most extensive studies to date of the relationship between well-being during unemployment and the probability of reemployment is by Ginexi, Howe, and Caplan (2000). The authors assessed mental health of 254 unemployed individuals three times; first within 49 days of their losing their job, then approximately five and eleven months later. Baseline and Time 2 levels of depression were not predictive of time to reemployment. However, a recent meta-analysis showed that although effect sizes were small,
lower levels of mental health were associated with longer unemployment durations (Paul & Moser, 2009).

Based upon the results of this meta-analysis, we propose a positive relationship between mental health and search success. Because few previous studies (Ginexi et al., 2000 is an exception) have been able to assess mental health early in the unemployment experience along with repeated assessments of mental health over the duration of the unemployment experience, we suggest our study has the potential to contribute unique insight into mental health as a predictor of job-search success. We propose:

_Hypothesis 10: Mental health at the start and across the duration of the unemployment experience will be positively related to reemployment speed and number of interviews._

**METHODS**

**Participants**

Participants were drawn from a pool of unemployment insurance recipients identified by the Department of Employment and Economic Development as having been unemployed for three weeks or less and eligible for a full duration claim (25 or 26 weeks of unemployment insurance). We sought out individuals unemployed for three weeks or less because our aim was to get individuals into the study as quickly after job loss as possible (to reduce problems of left-censoring and allow a logical starting point for examination of changes in the job search experience over time). Unemployment insurance is available to individuals who lose their jobs through no fault of their own (e.g., they did not quit and were not fired for misconduct); individuals also have to be available for work and seeking full time employment. Individuals eligible for less than 25 weeks of unemployment insurance tend to have more intermittent connections with the workplace. Potential participants were also between the ages of 25 and 50.
with no UI claim in the last four years, and having either a bachelors or masters degree. The state unemployment rate during the duration of the study (end of January, 2008 to beginning of July, 2008) ranged from 4.5% to 5.4%. Our expectation is that future dynamic research can build upon our findings with broader populations and within the context of more or less severe unemployment rates.

Our study design required individuals to complete a weekly online survey for 20 weeks. Study invitations were sent by mail and individuals were asked to enroll in the study by visiting the study’s web site. We recognized the serious challenge posed by sending individuals a “cold” invitation in the mail for a study with such onerous requirements. To enhance our response rate, our study invitation was accompanied by a professional brochure with clear information about the study requirements. We offered individuals a $20 incentive to enroll in the study and complete the baseline survey within one week. Individuals were promised another $20 to complete the second weekly survey and an additional $75 if they completed at least 16 of the 20 surveys involved in the project.

A total of 508 individuals were invited to be in the study. Of these individuals, 182 enrolled and completed baseline surveys (36%). Participants were compared on database elements available from the state with those who were invited and did not participate. Participants do not differ from non-participants in terms of their maximum allowed unemployment insurance amount ($t=-.68, p<.50$), their unemployment insurance account balance at the end of the study ($t=-1.40, p<.17$), whether they exhausted their unemployment insurance at the end of the study ($t=.47, p<.64$), proportion of females ($t=1.15, p<.26$), age ($t=-.26, p<.80$), education level ($t=-.41, p<.72$), or the length of unemployment up to the start of the study ($t=-
.98, \( p < .33 \)). However, the proportion of White in the respondents is higher than that in the pool of potential participants (\( t = 2.73, p < .01 \)).

Individuals enrolled in the study were sent online surveys every week for the 20 weeks following the baseline survey (e.g., end of January, 2008 to beginning of July, 2008). An email with a survey link was sent to individuals at noon each Friday. Individuals were asked to complete the survey by Sunday evening of each week. Response rates to the weekly surveys ranged from a low of 74\% (\( n = 113 \)) to a high of 95\% (\( n = 172 \)).

A total of 177 individuals completed at least the baseline survey and one weekly survey; these individuals constituted the sample for this study. Of the 177 individuals, the average age was 37 years ago (SD = 7.52). Forty percent of them were female and 93.8\% were white. On average, they had been unemployed for 28 days (SD = 10.5) at the time they enrolled the study, about 60\% of them had a professional occupation before unemployed, 19\% had an occupation in clerical or sales related fields, and 21\% had occupation in other areas.

A total of 132 individuals became reemployed during the duration of the study (\( n = 35 \) in Week 1, 9 in Week 2, 6 in Week 3, 7 in Week 4, 10 in Week 5, 3 in Week 6, 2 in Week 7, 9 in Week 8, 6 in Week 9, 8 in Week 10, 4 in Week 11, 4 in Week 12, 3 in Week 13, 5 in Week 14, 3 in Week 15, 6 in Week 16, 6 in Week 17, 1 in Week 18, 3 in Week 19, and 2 in Week 20). These individuals were included in the study up to the point of reemployment.

**Measures**

Demographics, control variables, and motivational traits were assessed in the baseline survey. Self-regulatory states, job-search intensity, and mental health were assessed in every weekly survey during the period when respondents were looking for a job. If respondents indicated that they had found a job, or had received an offer and planned to accept, they were
asked to complete a different version of the online survey and informed that their participation in the study had ended.

**Baseline Survey Measures**

Approach and avoidance motivation were measured using personal mastery and motivation related to anxiety subscales from the Motivational Trait Questionnaire (MTQ, Heggestad & Kanfer, 2000; Kanfer & Ackerman, 2000). The personal mastery scale consists of 16 items and the motivation related to anxiety scale consists of 19 items. Respondents were asked to indicate the extent to which each item describes them (1 = very untrue of me, and 6 = very true of me). Example items for personal mastery include “When I become interested in something, I try to learn as much about it as I can” and “If I already do something well, I don’t see the need to challenge myself to do better (reverse).” Example items for motivation related to anxiety include “When working on important projects, I am constantly fearful that I will make a mistake” and “I do not get nervous in achievement settings (reverse).” Evidence supporting discriminant validity of these two motivational traits from each other and other personality measures is available in Heggestad and Kanfer (2000) and Kanfer and Ackerman (2000).

Age in years, education level (0 = BA or below, 1 = MA or above), gender (0 = male, 1 = female), and race (0 = non-White and 1 = White) were included as control variables. Number of days unemployed at the time of baseline and occupation (three categories, i.e. Professional, technical, and managerial, Clerical and sales, and Others) were also controlled. Finally, a one item measure of employment commitment was used to control for individual differences in importance of finding work (Rowley & Feather, 1987). The item, “Having a job is very important to me,” was rated on a 5-point scale ranging from 1 (strongly disagree) to 5 (strongly agree).
**Dynamic Survey Measures**

*Motivational control* was assessed with four items designed to examine individuals’ intentional and cognitive redirection of attention toward their job-search, use of goal setting, or environmental management of their job search over the previous week. Sample items include “If I got interrupted, I worked harder on my job search”, “I mentally pushed myself to work harder on my job search”, and “I boosted my motivation to look for a job.” Responses to the items were provided on scales ranging from 1 (not at all true of me) to 5 (very true of me).

*Self-defeating cognition* was assessed with six items that asked individuals about having negative self-thoughts over the previous week with regard to their job search. Respondents indicated their agreement with each item using a five-point Likert scale, ranging from 1 (not at all true of me) to 5 (very true of me). All items were written as examples of poor emotion control, with higher scores indicating more frequent self-defeating cognition. Sample items include “I thought about simply giving up on job search,” “It occurred to me that all my efforts to get a job weren't worth the trouble,” “I felt like I couldn't continue to do this anymore,” and “I thought about how hopeless it was to look for a new job.”

*Job-search intensity* was assessed by asking individuals the following question in each weekly survey, “How many hours did you spend on your job search each day this week?” The number of hours spent on job search in each day was totaled for each week to prepare a weekly hours spent in search index. Hours spent in job search has been shown to be highly correlated (r = .56 to .68) with multiple item assessments of job-search intensity (Wanberg et al., 2005).

*Mental health* was measured each week over the duration of the study using the 5-item Mental Health Inventory (MHI-5; Berwick et al., 1991), a short version of the 38-item MHI (Veit & Ware, 1983). Respondents were asked to respond to each item with respect to the past week
using a 6-point Likert scale, ranging from 1 (none of the time) to 6 (all of the time). Sample items include "have you felt downhearted and blue?" and "have you been a very nervous person?" The items are averaged and coded so that higher scores indicate better mental health. The literature of mental health, when summing the items and coding higher scores as poorer mental health, has suggested that a cut off score of 16/17 or higher on a range of 5-30 would indicate a major depression (Berwick, Murphy, Goldman, Ware, Barsky, & Weinstein, 1991). A straight transformation into our scoring method indicates that a cut of score of 3.6/3.8 or lower on a range of 1-6 would suggest the major depression in our study. To ensure that this variable was distinct from self-defeating cognition, the items for the mental health inventory and self-defeating cognition were entered into a CFA with separate but related factors, and the fit indices indicated a good fit for the two-factor model \((\chi^2=75.57, df=41, p<.001, CFI=.96, TLI=.94, RMSEA=.08)\). Combining the two into one construct produced a significantly inferior fit \((\chi^2=261.77, df=42, p<.001, CFI=.73, TLI=.65, RMSEA=.20)\). These CFA results were based on data from the first week and similar results were obtained from other weeks.

**Indicators of Search Success**

Length of unemployment was used in survival analysis (Cox regression) to model the **reemployment rate-speed**. From state records, we obtained the job seekers’ last day for their previous job. Those who were reemployed reported their starting date for the new job. We calculated the difference between these two days as the length of unemployment for those reemployed. For those remained unemployed, the length of unemployment was right-censored at the end of the study. At study end, 25.4% of our sample was still unemployed (n= 45) and 74.6% had found jobs (n = 132).
Number of interviews was calculated as the average number of interviews one had per week during the unemployed experience. In the weekly survey, individuals were asked a question “how many interviews did you have this past week?” This number was summed and divided by the number of weeks individuals responded to the survey during unemployment.

Analyses

The data set has a hierarchical structure, where repeated measures (Level 1) were nested within individuals (Level 2). For Hypothesis 1a-8, hierarchical linear modeling (HLM) was used to test the within-individual relationships among approach and avoidance motivation, motivational control and self-defeating cognition, and job search intensity and mental health. Hypothesis 6a-8 involved using dynamic predictors, i.e., motivational control and self-defeating cognition at each week to predict that week’s job search intensity and mental health. SAS PROC MIXED (Fitzmaurice, Laird, & Ware, 2004) was used to test these models. For Hypothesis 9 and 10, we used Cox regression (i.e., proportional hazard model, Klein & Moeschberger, 1997) and OLS regression to predict the speed of reemployment and number of interviews. Due to the unique design of the data collection, we examined the electronic stamps of each week’s response to ensure that the weekly surveys were submitted within the appropriate time frame (i.e. between Friday noon and Sunday midnight). Responses with inappropriate time stamps were deleted to avoid potential bias.

RESULTS

Descriptives

Table 1 portrays descriptive statistics and correlations for baseline variables (variables 1-11), repeated measures (variables 12-15) and distal outcome measures (variables 16-17). Because we have 20 time waves of data available for variables 12-15, correlations shown for
these variables are for the measures assessed in the Week 1 survey. Before testing the hypotheses, we examined whether systematic within- and between-individual variance existed in the repeated measure variables by running a series of null (intercept-only) models. The analyses supported both conducting repeated measures and using hierarchical linear modeling on these data, as there was sufficient within- and between-individual variance in the measures across time. For example, 53% for motivational control, 41% for self-defeating cognition, 22% for job search hours, and 26% for mental health of the variance reside within-individual. The average number of hours spent in job search per week across the 20 weeks of our study was 14.5 hours per week, ranging from 11.2 to 17.7 hours.

We also examined the trends of our repeated measures with unconditional HLM models (only including the intercept, linear term and quadratic term) to portray the average changing patterns of these variables over time. Table 2 shows the results of these models. The intercept, linear (week), and quadratic (week²) coefficients are significant for all variables, indicating that there was an average within-person change on these variables over time. Because various authors have been interested in the question of well-being and job search intensity changes over time for individuals over the duration of the unemployment experience (e.g., Borgen & Amundson, 1987; Saks & Ashforth, 2000), we plot the average trajectory for these two focal variables in Figure 2a-2b. Figure 2a portrays a decline in job search over time. Figure 2b shows that well-being tends to reflect an inverted u (reflecting lower mental health early on, subsequent improvement, and a later decline). This aggregate trend data must be interpreted with the caveat that there was significant variability in the trends across individuals, meaning that this trend is not the same for everyone (see Table 2). Notably, the curvilinear effects were small; in our hypothesis testing to
follow, we exclude the curvilinear terms in the Level 1 models to aid in reducing the complexity of our models.

**Tests of Hypotheses**

Hypothesis 1a stated that approach-oriented trait motivation would be positively related to job search intensity at the start of the unemployment experience, which was supported ($\gamma = 3.75$, Model 1a, Table 3). Hypothesis 1b suggested that higher approach-oriented trait motivation would be associated with higher overall levels of job search intensity during the unemployment experience. This hypothesis was supported (see Model 1b, Table 3). The coefficients indicate that a one-point increase in approach-oriented motivation was associated with 3.79 hours more of job search on average per week across the duration of unemployment. While we do not provide figures for each set of relationships we discuss, Figure 3 visually illustrates the job search hours trend over time of people who were high (in the top third) versus people who were low (in the bottom third) on approach motivation. The figure helps portray the dynamic nature of the analyses we are reporting.

Hypothesis 2 indicated that higher avoidance-oriented trait motivation would be associated with a decline (opposed to a flat line or an increase) in job search intensity across time during the unemployment experience. Results (Model 2, Table 3) did not support this hypothesis. In other words, the overall trend for a decline in job-search over time was not related to avoidance orientation.

Hypothesis 3a suggested that approach-oriented trait motivation would be positively related to mental health at the start of the unemployment experience. Model 3a of Table 3 supported this hypothesis. Hypothesis 3b predicted that approach-oriented trait motivation would also be positively related to average levels of mental health across the unemployment experience.
This was supported as well (Model 3b, Table 3). Results of the two hypotheses together showed that individuals with one point higher in approach-oriented trait motivation were .32 point higher on their mental health level at the start of the unemployment, and also .30 point higher on average across the unemployment experience.

Hypothesis 4a suggested that avoidance-oriented trait motivation would be negatively related to mental health at the start of the unemployment experience, and then would be negatively related to the slope of mental health across time. This was tested in Model 4a of Table 3. Results partially supported this hypothesis. Specifically, avoidance-oriented trait motivation was negatively associated with mental health at the start ($\gamma = -.48$, $p<.01$), but did not predict the slope of the mental health over time ($\gamma = -.0043$, n.s.). Hypothesis 4b suggested that avoidance-oriented trait motivation would be negatively related to overall levels of mental health across the unemployment experience. This was supported in Model 4b of Table 3.

Hypothesis 5a was partially supported and Hypothesis 5b was fully supported. Specifically, one point increase in approach motivation was associated with an average of .33 point increase in motivational control, but not significantly related to self-defeating cognition. In contrast, one point increase in avoidance motivation was associated with an average of .16 point decrease in motivational control and .35 point increase in self-defeating cognition across the unemployment experience.
The goal of the next set of analyses was to investigate whether motivational control and self-defeating cognition reported in each week account for differences in weekly job search intensity and mental health levels. Hypothesis 6a and 6b suggested that in weeks where motivational control was higher, job search intensity and mental health would also be higher. Results in Model 7 and Model 8 supported these two hypotheses. Specifically, one point increase in motivational control in a given week was associated with 3.39 point increase in job search hours and .08 point increase in mental health in that same week.

Not supporting Hypothesis 7a, levels of self-defeating cognition at in a given week did not predict levels of job search intensity in the same week (γ = .42, n.s.; see Model 7 in Table 3). Hypothesis 7b, however, was supported, with higher levels of self-defeating cognition in a given week associated with lower levels of mental health in the same week (γ = -.34, p<.01; see Model 8 in Table 3).

Hypothesis 8 suggested a mediating effect of motivational control and self-defeating cognition between approach and avoidance motivation and mental health and job-search intensity. As avoidance motivation and self-defeating cognition did not predict job search intensity, we tested the mediating effect of motivational control between approach motivation and job search intensity and mental health, respectively, as well as the mediating effect of motivational control and self-defeating cognition between avoidance motivation and mental health with Baron and Kenny (1986)’s 3-step procedure. Results in Model 9 of Table 3 showed that the coefficient between approach motivation and job search intensity decreased from 3.75 to 2.16 after including motivational control and self-defeating cognition in the equation. As approach motivation was not related to self-defeating cognition, motivational control partially mediated the relationship between approach motivation and job search intensity. Likewise, the
coefficient between approach motivation and mental health dropped from .32 to a non-significant .20 as shown in Model 10, hence, motivational control fully mediated the relationship between approach motivation and mental health.

Similarly, the coefficient between avoidance motivation and mental health decreased from -.48 to -.37 after including motivational control and self-defeating cognition in the equation. Hence, motivational control and self-defeating cognition partially mediated the relationship between avoidance motivation and level of mental health (see Model 11, Table 3). A test of including motivational control and self-defeating cognition separately indicated that self-defeating cognition (coefficient dropped to -.37) was a stronger mediator than motivational control (coefficient dropped to -.45).

Hypothesis 9 suggested that job search intensity at the start and across the unemployment experience will be positively related to number of interviews and reemployment speed. We conducted Cox regressions and OLS regression for the dependent variables reemployment speed and number of interviews, respectively. Table 4 shows the results for these analyses. Using both job search intensity and mental health at the beginning of unemployment as the predictors, we found that job search intensity at the start of the unemployment experience was not related to reemployment speed, but was positively related to average number of interviews per week ( \( \gamma = .04, p<.001 \) ). Using search intensity and mental health across the duration of unemployment as the predictors, we found that average job search intensity is positively related to both reemployment speed (hazard ratio= 1.03, \( p<.05 \)) and number of interviews ( \( \gamma = .05, p<.001 \)). Thus, Hypothesis 9 was partially supported for the relationship between average search intensity and reemployment speed as well as initial and average search intensity and number of interviews.
Hypothesis 10 suggested that job seekers’ mental health at the start and across the unemployment experience will be positively related to reemployment speed and number of interviews. The results from Table 4 indicated that mental health at the start was positively related to the number of interviews ($\gamma = .17$, $p<.05$), but whether at the start or across the unemployment experience, it was not related to reemployment speed. Thus, Hypothesis 10 was only partially supported for the relationship between initial mental health and number of interviews per week.

Table 5 summarizes our hypotheses and whether and how they are supported.

**DISCUSSION (in progress)**

For many individuals, job loss means a loss of income, dusting off a resume that may not have been used in some time, and navigating the ambiguous and potentially frustrating job search process. This work contributes to the extant literature by providing a meaningful conceptualization and extension of self-regulation theory to the job loss experience over time. Supporting the conclusions of Creed et al. (2009), Kanfer et al. (2001), Niessen et al. (2009) and Wanberg et al. (in press), we find that self-regulation provides a valuable framework from which to study the job loss-job search experience. Extending this previous work, however, the dynamic context, process orientation, and inclusion of both performance (job-search intensity) and affective (mental health) outcomes in our conceptual model provided new empirical and theoretical insights into the role of self-regulation in the job loss journey.

Self-regulation theory is by its nature a dynamic theory (Carver, 2004; Kanfer et al., 2008; Ployhart, 2008), and the job loss journey is by nature a dynamic experience. It has been rare for field studies using a self-regulatory focus in any context, including job-search, to have incorporated the temporal dimension. The repeated measures examination of our study allowed
important insight into the relationship between self-regulatory traits and our focal outcomes over time. For example, our findings indicate that approach-oriented motivation is related to higher levels of job search and mental health both at the start and across the unemployment experience. Although our slope hypotheses were not supported with respect to avoidance motivation predicting declines in job search and mental health, avoidance motivation was related to lower levels of mental health at both the start of the unemployment experience and over time.

The dynamic nature of the study also provided an unprecedented means of improving the understanding of the pathways by which motivational traits may have their impact in the job loss context. According to self-regulation theorists, individual differences in motivational traits represent distal influences on action that exert their strongest effects through their influence on corresponding self-regulatory states and processes. From a practical perspective, this suggests that interventions directed toward self-regulatory states and processes may attenuate the influence of stable traits on behavior and mental health. Findings obtained in this study provide support for this notion and the potential value of self-regulation training to attenuate the negative impact of trait tendencies. Specifically, we found that motivational control fully mediated the influence of approach motivation on mental health, partially mediated the influence of avoidance motivation on mental health, and partially mediated the impact of approach motivation on job search behavior. These results strongly suggest that interventions directed at helping persons develop self-regulatory strategies that redirect and sustain effort for job search should have a salutary effect on mental health as well as job search intensity. The partial mediating impact of self-defeating cognition on the relationship between avoidance orientation and mental health also suggests that including training to control emotional states may also benefit mental health.
It was somewhat unexpected to us that neither individual differences in avoidance orientation or poor emotion control states had a significant relationship with job search intensity. We propose that this unexpected pattern of findings may reflect the influence of context on self-regulatory processes. Specifically, we suggest that our findings may be explained by reconsidering the notion of resource conflict in the job loss-job search context. In contrast to studies of self-regulation in the learning and job performance domains, where resource conflicts arise primarily as a function of the speeded or time-limited context for performance, emotion control may be less important for performance in the unemployment context. That is, as our findings show, unemployed persons engaged in job search report self-defeating cognition (poor emotion control states) and still allocate effort toward job search. Further, the negative impact of avoidance orientation and poor emotion control states appears limited to affective outcomes, such as mental health. Identifying the situational factors associated with a negative impact of self-defeating cognition on job search behavior represents an important direction for future research. For example, it may be that in the job search context, individuals tolerate higher levels of negative emotional state than in other contexts. In addition, it may be that individuals in this context tend to employ extreme, resource disruptive emotion control strategies only when self-defeating cognition becomes extreme, such as when individuals who begin to experience very high levels of self-defeating cognition try to improve their emotional state by engaging in more frequent socializing or exercising (thereby lessening the time available to engage in job search). In this study, the mean level of reported self-defeating cognition across the study period was not particularly high, suggesting that persons in our sample generally did not experience intolerable negative emotions. Although we did not attempt to measure whether and which emotion control
strategies our participants employed, future research should include more specific assessment of emotion control strategy use as well as emotion control state.

The application of self-regulation theory to job loss has made substantial strides. Summarize Kanfer et al here? Our study’s expanded framework focused on gleaning insight into role of self-regulatory traits and states during job loss and examining their relationship with both mental health and job-search as well as reemployment success outcomes. Our data provides valuable, even if preliminary, insight into process mechanisms. Job search and mental health are so central to the job loss experience, and dynamic, process oriented studies are essential to gaining insight into what is happening from day to day, week to week, and month to month. Our proposed framework provides a solid base from which future studies can build upon to further explore the dynamics of the job loss experience.
REFERENCES


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regulatory dysfunction in depression: A randomized comparison with cognitive therapy.


### TABLE 1

Descriptives and Correlations of Selected Study Variables

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**Note:** Variables 1-11 were assessed in the baseline survey (n = 177). Variables 12-15 were assessed each week for a total of 20 measurements, only the week 1 measures are included here. Entries on the diagonals are alphas for the listed variables.
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*p < .05, ** p < .01.
### TABLE 3
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<td>.31</td>
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<td>.2</td>
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<td>Approach motivation x week</td>
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<td>Motivational control</td>
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<td>Self-defeating cognition</td>
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<td>2147</td>
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</table>

Note: N = . SAS Proc Mixed analysis was used with the RE-AR(1) variance-covariance structure. Entries corresponding to the predictors in the first column are estimates of fixed effects, \(\gamma_s\).

* \(p < .05\), ** \(p < .01\).
a Occupation was dummy-coded into three groups (professional, clerical, and other occupations); the comparison group is other occupations.
b Model fit index is -2log-likelihood estimate, the smaller the value is, the better the fit.
<table>
<thead>
<tr>
<th>Variable</th>
<th>Reemployment rate/speed</th>
<th>Average # of interviews per week</th>
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<tbody>
<tr>
<td>Intercept</td>
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<tr>
<td>Age</td>
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<td>.98</td>
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<tr>
<td>Education (0 = BA or below, 1 = MA or above)</td>
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<td>.55</td>
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<tr>
<td>Gender (0 = male, 1 = female)</td>
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<td>1.02</td>
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<td>Ethnicity (0 = non-white, 1 = white)</td>
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<td>Days unemployed before the start of the study</td>
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<tr>
<td>Occupation-Professional a</td>
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<td>.70</td>
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<tr>
<td>Occupation-Clerical</td>
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<tr>
<td>Employment commitment</td>
<td>1.19</td>
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<td>Average mental health over the duration</td>
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<td>Average job search hours over the duration</td>
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<td>Week 1 search hours</td>
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<td>$R^2$</td>
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</table>

Note. * $p \leq .05$, ** $p < .01$, *** $p < .001$. Hazard ratios are reported for the reemployment rate/speed analysis. A coefficient greater than 1.0 means that the variable is associated with faster reemployment speed.

a Occupation was dummy-coded into three groups (professional, clerical, and other occupations); the comparison group is other occupations.
### TABLE 5
Summary of Hypotheses

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Support?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hypothesis 1a:</td>
<td>Approach-oriented trait motivation will be positively related to higher levels of job search intensity at the start of the unemployment experience.</td>
</tr>
<tr>
<td>Hypothesis 1b:</td>
<td>Approach-oriented trait motivation will be positively related to higher levels of job search intensity across the unemployment experience.</td>
</tr>
<tr>
<td>Hypothesis 2:</td>
<td>Avoidance motivation will be associated with a decline in job search intensity across the unemployment experience.</td>
</tr>
<tr>
<td>Hypothesis 3a:</td>
<td>Approach-oriented trait motivation will be related to higher levels of mental health at the start of the unemployment experience.</td>
</tr>
<tr>
<td>Hypothesis 3b:</td>
<td>Approach-oriented trait motivation will be related to higher average levels of mental health across the unemployment experience.</td>
</tr>
<tr>
<td>Hypothesis 4a:</td>
<td>Avoidance-oriented trait motivation will be related to lower levels of mental health at the start of the unemployment experience, and will be negatively associated with the slope of mental health across the unemployment experience.</td>
</tr>
<tr>
<td>Hypothesis 4b:</td>
<td>Avoidance-oriented trait motivation will be related to lower levels of mental health across the unemployment experience.</td>
</tr>
<tr>
<td>Hypothesis 5a:</td>
<td>Higher levels of approach motivation will be associated with higher average levels of motivational control and lower levels of self-defeating cognition across the unemployment experience.</td>
</tr>
<tr>
<td>Hypothesis 5b:</td>
<td>Higher levels of avoidance motivation will be related to lower average levels of motivational control and higher levels of self-defeating cognition across the unemployment experience.</td>
</tr>
<tr>
<td>Hypothesis 6a:</td>
<td>During weeks when individuals exert more motivational control, we expect their job-search intensity to be higher, compared to weeks when they exert less motivational control.</td>
</tr>
<tr>
<td>Hypothesis 6b:</td>
<td>During weeks when individuals exert more motivational control, we expect their mental health to be higher, compared to weeks when they exert less motivational control.</td>
</tr>
<tr>
<td>Hypothesis 7a:</td>
<td>During weeks when individuals report higher levels of self-defeating cognition, job-search intensity will be lower than in weeks when they report lower levels of self-defeating cognition.</td>
</tr>
<tr>
<td>Hypothesis 7b:</td>
<td>During weeks when individuals report higher levels of self-defeating cognition, mental health will be lower than in weeks when they report lower levels of self-defeating cognition.</td>
</tr>
<tr>
<td>Hypothesis 8:</td>
<td>The relationship between approach and avoidance motivation and mental health and search intensity will be mediated by motivation.</td>
</tr>
<tr>
<td>Hypothesis 9:</td>
<td>Motivational control and self-defeating cognitions.</td>
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<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Hypothesis 10:</td>
<td>Mental health at the start and across the duration of the unemployment experience will be positively related to number of interviews and reemployment speed.</td>
</tr>
</tbody>
</table>
FIGURE 1
Theoretical Framework

Baseline
(Week T)

Each Week Ti

Each Week Ti

Motivational Traits

Approach Motivation

Avoidance Motivation

Motivational Control

Self-defeating Cognition

Search Intensity/Adjustment

Job Search Intensity

Mental Health

Self-Regulatory States
FIGURE 2
Mean Plots of Job Search Hours and Mental Health across the Unemployment Experience

Trend of Job Search Hours During Unemployment Experience

Trend of Mental Health During Unemployment Experience
FIGURE 3
Job Search Hours Trend Break Down on High v.s. Low Levels of Approach Motivation

--- : Top 1/3 on Approach Motivation, --- : Bottom 1/3 on Approach Motivation