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Jomel Wei Xuan NG

Zhaoli SONG

Filip LIEVENS

Singapore Management University, [filiplievens@smu.edu.sg](mailto:filiplievens@smu.edu.sg)

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# Human capital effects in the job search process for new labor market entrants: A double-edged sword?

Jomel Wei Xuan Ng<sup>a, \*</sup>, Zhaoli Song<sup>b</sup>, Filip Lievens<sup>c</sup>

<sup>a</sup> Zhejiang International Business School, Zhejiang University

<sup>b</sup> Department of Management and Organization, National University of Singapore

<sup>c</sup> Lee Kong Chian School of Business, Singapore Management University

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## ABSTRACT

Although traditional research on human capital shows that it enhances employment success, its role in the job search process is unclear. To explain its weak effects in previous studies, this study draws on goal system theory to propose that human capital may act as a double-edged sword: On one hand it facilitates the ease of gaining employment, on the other hand it may compromise the frequency of job search behaviors. We conducted a bi-weekly repeated survey study on new labor market entrants and measured human capital using academic achievement scores. Results confirmed that human capital, though instrumental for proximal job search success, interferes with self-regulatory behaviors in job search. That is, human capital negatively predicted within-person job search intensity, and negatively moderated the within-person relationship between employment efficacy and job search intensity. On the positive side, human capital positively predicted within-person number of interview invitations. Overall, these results provide a more nuanced picture of the role of human capital in the job search process.

## 1. Introduction

Job seekers expend significant effort on activities to advance towards the eventual goal of receiving desirable job offers. The job search grind is especially prevalent among new labor market entrants (Liu et al., 2014; Sun et al., 2013), who have yet to accumulate effective job search experiences. Individual resources purportedly play an enabling function in job search self-regulation and may ease the job search grind (Hobfoll, 2002). One of these individual resources is psychological capital (i.e., an umbrella term encompassing self-efficacy, hope, optimism and resilience; Luthans et al., 2007), which should maintain confidence that employment is achievable, buffer against negative affect arising from tedious job search activities, and thus sustain search efforts. Unsurprisingly, psychological capital strengthens employability self-evaluations and promotes problem-focused coping, both of which produce higher job search effort (Chen & Lim, 2012).

Human capital (i.e., the knowledge, skills and abilities acquired by individuals; Coff & Kryscynski, 2011) represents another individual resource. In line with human capital theory (Becker, 1962, 1964; Schultz, 1961), it is well known that job seekers with higher educational qualifications, relevant work experiences and technical capabilities have an advantage in the labor market. This is because recruiters perceive these human capital investments as proxies of knowledge, skills, and cognitive abilities to gauge whether job seekers meet the job requirements (Chien & Chen, 2008). Contrary to psychological capital, however, results of empirical research on the effects of human capital on job search outcomes have been equivocal. One primary study found mixed effects of human capital on

\* Corresponding author at: Zhejiang International Business School, Zhejiang University, 718 East Haizhou Road, 314400, Haining, Zhejiang, China

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reemployment speed (Wanberg et al., 2002): although reemployment speed was positively associated with self-reported skills and negatively associated with tenure in previous jobs, it was not associated with education. Also, two meta-analyses reported small and unstable correlations (i.e., 80 % credibility intervals included zero) between human capital and both job search behaviors and outcomes (Kanfer et al., 2001; Van Hoof et al., 2021). Moreover, the role of human capital on job search self-regulation is still not well understood. This is because measures of human capital have been utilized as demographic controls in most previous job search studies. This leaves the potential role of human capital in the job search process in relation to affecting job seekers' motivations, behaviors and job search outcomes largely unclarified. Although social cognitive and expectancy value perspectives may be used to posit that human capital results in positive expectancies and thus generates beneficial effects on job search self-regulation (Kanfer et al., 2001), these perspectives anticipate only positive effects and are therefore unable to explain the mixed findings.

The unclear role of human capital in the job search process is problematic for two reasons. First, conceptually, we are still in the dark about the reasons as to why studies found small and mixed effects of human capital. Wanberg et al. (2002) hypothesized positive effects of human capital on job search success but found mixed effects, while existing job search meta-analyses used an exploratory stance in investigating effects of human capital on job search self-regulation and outcomes (Kanfer et al., 2001; Van Hoof et al., 2021). While arguing for positive effects of human capital on job search success is intuitive, its potential negative effects on job search process are perplexing and in need of theorizing. Second, practically, given the dominant role that human capital plays in portraying job seekers' knowledge, skills and abilities to prospective employers, it is critical for job seekers and career counsellors to gain a deeper understanding of its potential pitfalls. If human capital investment indeed places negative effects on job search self-regulation, job seekers and career counsellors must exercise caution and minimize the interference of academic or vocational activities on job search tasks.

As this paper's main premise, we draw on goal system theory (Kruglanski et al., 2002, 2015) to propose that human capital, or acquiring human capital per se, may divert attention away from job search activities, particularly when human capital is expected to increase one's ability to attain employment goal. Similar to any situation that concerns acquisition of especially tangible resources like human capital, we posit that resource acquisition is generally instrumental to effectiveness and well-being but may also impose costs on time and effort expenditure. We advance that human capital has not only positive effects for job seekers but also imposes negative effects, and this depends on which stage in the unfolding job search process is of interest.

Using the metaphor of human capital acting as a double-edged sword, our study aims to understand in a more nuanced way how human capital influences job search cognitions, behaviors, and proximal outcomes for new labor market entrants over an extended job search period. As hypothesized via a multilevel model, we model the effects of new labor market entrants' human capital (operationalized via their academic grades using an objective measure) on employment efficacy, job search intensity, and number of interview invitations at a within-person level. We also model human capital as a cross-level moderator of the within-person relationships (1) between employment efficacy and job search intensity; and (2) between job search intensity and interview invitations.

Our research contributes to theory and practice in several ways. First, our study adopts a novel perspective in using goal system theory to espouse the double-edged sword role of human capital in the job search process. Beside positive effects on job search outcomes, we contend that human capital may discourage job search intensity when measured at a within-person level and lead to lower within-person job search intensity among job seekers who are high (vs. low) in within-person employment efficacy. Finding evidence in support for our contention is theoretically meaningful because it encourages us to rethink how resources can produce unintended effects in the job search process. By extension, our study proposes and tests two novel reasons (i.e., *assurance effect* and *interference effect*) why human capital can negatively affect job search intensity. Also, our investigation contributes to knowledge on boundary conditions of within-person effects of employment efficacy on job search engagement. From a practical perspective, our study illuminates the possible negative effects of human capital investment on job search self-regulation, that can offer valuable advice for job seekers, career counsellors, and university career centers.

## 2. Theory and hypotheses

### 2.1. Overview of model

The unfolding job search process illustrates the natural progression from a specified set of job search antecedents to job search behavioral engagement, interview participation, and receipt of one or more employment offers out of which one is accepted (da Motta Veiga et al., 2018; Kanfer et al., 2001; Saks, 2006). Focusing firstly on the relationship between psychological self-regulation and behavioral self-regulation, we connect goal system (Kruglanski et al., 2002, 2015) and control-process (Carver & Scheier, 1990, 2012) perspectives to hypothesize (1) the direct effects of human capital on employment efficacy and job search intensity; and (2) the cross-level moderating effect of human capital on the within-person relationship between employment efficacy and job search intensity. We then turn to the relationship between behavioral self-regulation and proximal job search outcomes, wherein we use prior research on predictors of employment success to hypothesize (3) the direct effect of human capital on interview invitations; and (4) the cross-level moderating effect of human capital on the within-person relationship between job search intensity and interview invitations.

### 2.2. Cross-level effects of human capital on job search behavioral self-regulation

Individuals gain general and domain-specific expertise through investment in formal education, informal upskilling, and acquiring work experiences (Becker, 1962, 1964; Schultz, 1961). As human capital investment is a gradual and prolonged activity beginning

in childhood and extending over one's lifespan, it is also likely to take place while one pursues new employment. For instance, new labor market entrants, which serve as this study's target job seeker demographic (see Method), are still vested in schoolwork.

The objective in job search is to secure new and desired employment (Kanfer et al., 2001). Job search comprises a goal-directed phased process beginning from the identification of an employment goal followed by the execution of job search tasks and culminating in acceptance of an employment offer (da Motta Veiga et al., 2018; Kanfer et al., 2001; Saks, 2006). According to goal systems theory, job seekers are embedded in a motivational network system comprising goals, means, and their interconnections (Kruglanski et al., 2002, 2015). They manage multiple goals (e.g., assuring financial security and enjoying intimate relationships) alongside their employment goal. Employment is one goal which complements most higher-order goals (e.g., assuring financial security).

There are multiple pathways to attain employment goal (Van Hooff et al., 2021; Wanberg et al., 2002), and expending attentional and cognitive resources on job search activities represents one very proximal pathway. Beside active job search engagement, human capital investment is another viable pathway leading to attainment of employment goal (Wanberg et al., 2002). One may receive interview and employment offers from family, friends and acquaintances even if one is not actively applying for jobs, perhaps because one possesses stellar academic records or valuable work experiences. People with desirable human capital qualities and work affiliations may also be on headhunters' radar for job placement. In other words, job seekers increase the likelihood of attaining employment goal by studying hard to score exemplary grades, upskilling themselves in relevant expertise or gaining initial work experiences in reputable companies. This argument is in line with propositions in human capital theory that organizations acquire human capital resources through hiring skilled employees and paying equitable wages (Schultz, 1961; Wallace & Fay, 1988).

Goal system theory proposes that goal equifinality (i.e., availability of multiple means to goal attainment) increases people's expectancies of goal attainment (Kruglanski et al., 2015). Applying this theoretical principle to job search (and holding job search intensity constant), the more human capital job seekers have acquired, the greater the ease they perceive in progressing through the job search stages because they anticipate receiving more interview and employment offers. Employment efficacy indicates one's confidence in ability to attain desired employment outcomes (da Motta Veiga & Turban, 2018; Liu et al., 2014; Wanberg et al., 2010).<sup>1</sup> Although employment efficacy vacillates over time owing to within-person variations in perceptions of job search progress in the lengthy job search process (Liu et al., 2014), job seekers high in human capital may perceive more strongly that they are able to attain favorable employment outcomes than job seekers low in human capital. Thus:

**Hypothesis 1.** Human capital positively predicts aggregated within-person employment efficacy.

Although human capital increases confidence in attaining employment goal, it may negatively affect job search intensity. We offer two reasons to explain why job seekers higher in human capital may be unmotivated to expend more than minimal job search effort. First, high human capital assures job seekers of their competitive advantage in the labor market because they have higher expectancies in attaining more favorable employment outcomes. This increases their confidence in ability to attain employment goal. The confidence engendered from positive feedback loops in job search (e.g., after receiving more interview invitations) may downplay the need to sustain effort in subsequent job search activities (Carver & Scheier, 1990, 2012). Supporting this contention, some job search studies found a negative within-person relationship between employment efficacy and job search intensity (da Motta Veiga & Turban, 2018; Liu et al., 2014).

Second, for new labor market entrants, high human capital may suggest heavy concurrent time commitment to academic or vocational work. When new labor market entrants conduct job searches, they are usually in the midst of pursuing their studies or may even be involved in part-time work. Goal system theory proposes that job seekers apportion scarce attentional and cognitive resources among different activities that facilitate multiple goals pursuit (Kruglanski et al., 2002). This is corroborated by other research on resource allocation among activities (Beck & Schmidt, 2018; Schmidt & Dolis, 2009; Wrosch et al., 2003). Referencing goal system theory (Kruglanski et al., 2002, 2015), the substitutability principle of equifinal goals suggests that committing to alternative means to employment goal attainment (i.e., human capital acquisition, be it academic pursuits or part-time work) interferes with job search engagement.

As acquiring human capital is a gradual and prolonged process, job seekers who have attained favorable academic grades before graduation (or have acquired certain depth of work experience) may be concerned that their academic ranking or work performance will slip and their past efforts will go to waste if they divert most of their scarce attention and time to job search activities. They therefore downplay the importance of job search, paying only minimal attention to job search activities and focusing more attention on academic and vocational tasks. In contrast, job seekers characterized as low in human capital (i.e., poor academic performance and very minimal vocational experience) may be less concerned about the perils of not devoting adequate attention to academic and vocational tasks. Their concerns may instead revolve around the ability to secure good employment, and in turn they perceive job search engagement as their most reliable means to secure good employment. Unlike their counterparts who are striving in human capital acquisition, they are less constrained in attention and cognitive load. Hence, they are motivated to maximize job search intensity. In other words, job seekers judge their tentative human capital circumstances and pursue different adaptive behaviors to maximize utility of their time and effort (Beck & Schmidt, 2018; Wrosch et al., 2003).

In sum, we theorize both assurance and interference effects of high human capital on job search intensity. The confidence engendered by human capital that desired employment is within reach reduces job seekers' urgency to maximize their job search intensity

<sup>1</sup> We are indebted to an anonymous reviewer for mentioning the distinction between employment efficacy and job search efficacy (see also Liu et al., 2014). Using the language of goal system theory, employment efficacy pertains to the confidence in the *ability to attain said goal*, whereas job search efficacy relates to the confidence in the *ability to satisfactorily perform said means*. In line with goal system theory, we are interested only in the confidence to attain the said goal and thus measured employment efficacy instead of job search efficacy.

(assurance effect). In addition, activities that acquire human capital compete with job search tasks for attentional and cognitive resources in pursuit of multiple goals (interference effect). Both of these effects explain why new labor market entrants high in human capital may strategically divert resources away from job search tasks towards other activities, in particular activities that acquire human capital. Thus:

**Hypothesis 2.** Human capital negatively predicts aggregated within-person job search intensity.

We refer to control-process theory to propose a within-person account on how employment efficacy influences job search intensity for job seekers differing in human capital (Carver & Scheier, 1990). As outcome expectancy, employment efficacy gives job seekers a rough judgment of the magnitude of discrepancy between current state (being unemployed) and desired state (gaining employment): high employment efficacy signals a small current-ideal state discrepancy in future employment while low employment efficacy signals a large current-ideal state discrepancy in future employment. In regulating job search behaviors, job seekers strive for discrepancy reduction between current and desired states in future employment (Liu et al., 2014). However, when job seekers perceive that they are impeded in the process of striving for minimal current-ideal state discrepancy, they may turn to the opposite behaviors of disengaging from attempts aimed at discrepancy reduction (Carver & Scheier, 1990). We propose low human capital as one impediment in discrepancy reduction in job search behavioral self-regulation.

For job seekers high in human capital, within-person gains in employment efficacy (e.g., after receiving an interview invitation to a reputable organization) lead them to judge themselves to be close to attaining employment goal. Drawing from our contention on the interference effect of human capital investment on job search intensity, job seekers high in human capital may channel available attention and effort to academic coursework or part-time gigs, and indulge in “coasting job search behaviors” (da Motta Veiga & Turban, 2018; Sun et al., 2013; Wanberg et al., 2010). On the other hand, within-person dips in employment efficacy (e.g., after a period of job search without any interview invitation) signal a large current-ideal state discrepancy in future employment and temporarily shift employment outlook to a less sanguine one. Despite their academic or vocational commitments, they may feel compelled to narrow this discrepancy by deferring these commitments and increasing job search effort. We anticipate a negative within-person relationship between employment efficacy and job search intensity for job seekers high in human capital.

Low human capital may impede the discrepancy reduction process in regulating job search behaviors. Job seekers low in human capital are aware of their low standing in employability vis-à-vis other job seekers. They are unlikely to let down their guard because their weak human capital qualities lead them to evaluate their future employment in a more conservative way. Similar to job seekers high in human capital, within-person gains in employment efficacy signal minimal current-ideal employment state discrepancy in future employment, but low human capital still poses threat to their future employment. They are also unlikely to face interference from academic or vocational activities, so they can focus on “pulling their socks up” in job search activities. In contrast to job seekers high in human capital, they resort to the opposite of expending even more job search effort. On the other hand, within-person dips in employment efficacy signal substantial current-ideal state discrepancy in future employment that warrants higher job search intensity, but these job seekers may perceive job search behaviors as futile in propelling them towards acceptable employment. They may become overwhelmed by their self-defeating cognitions and negative emotions, which Carver and Scheier (1990) argued to impede behavioral attempts at discrepancy reduction. These cause them to withdraw from further job search behaviors. We anticipate a positive relationship between employment efficacy and job search intensity for job seekers low in human capital.

**Hypothesis 3.** Human capital moderates the within-person relationship between employment efficacy and job search intensity, such that for job seekers high in human capital, employment efficacy negatively predicts job search intensity; for job seekers low in human capital, employment efficacy positively predicts job search intensity.

### 2.3. Cross-level effects of human capital on proximal job search outcome

Although we anticipate negative effects of human capital on job search intensity, we contend that human capital is a key resource in facilitating employment goal attainment. In initial stages of recruitment, labor market competition compels recruiters to select only a few job applicants who showcase desirable qualities in their curriculum vitae (e.g., stellar academic grades, relevant vocational history and cutting-edge technical skills). Exhibiting valued qualities embodied in human capital increases the likelihood of succeeding in initial selection before recruiters extend interview invitations. In other words, holding job search intensity constant, job seekers high in human capital are likely to receive more invitations for job interviews than job seekers low in human capital.

These expectations are confirmed by empirical research in selection and job search. Human capital is a weighty component of personnel selection criteria (Slaughter & Kausel, 2013; Spence, 1973) owing to its contributions to organizational performance (Crook et al., 2011). In addition, job search scholars also proposed that human capital is critical for employment success. They found higher education levels and skill repertoire to shorten unemployment duration (Kanfer et al., 2001; Wanberg et al., 2002), perhaps because showing such skills and capabilities conveys high task competence (Chien & Chen, 2008). Thus:

**Hypothesis 4.** Human capital positively predicts aggregated number of interviews at within-person level.

What is the role of human capital in the relation between job search intensity and obtaining interview opportunities? A recent meta-analysis found a small positive association between job search intensity and number of interview invitations ( $r = 0.23$ ; Van Hooft et al., 2021). Although submitting more job applications generally leads to more interview invitations, only a small fraction of job applications excels in competitive selection and proceeds to the interview stage. Specific attributes of the job seeker may influence the efficacy of job search intensity because they shape the recruiter's decision making in extending interview offers. In particular, we

expect that the attractiveness signalling effect of human capital functions as an “on/off” switch to decide if a job application converts into an interview invitation (Spence, 1973). The more attractive a job candidate's profile, the more likely the candidate is to proceed to the interview stage. Human capital may thus considerably strengthen the positive relationship between job search intensity and number of interview invitations. However, if a candidate's curriculum vitae does not showcase desirable qualities, recruiters may discard the job application, which makes the relationship between job search intensity and interview invitations less pronounced. Thus:

**Hypothesis 5.** Human capital strengthens the positive within-person relationship between job search intensity and number of interviews such that the relationship is more positive for job seekers high in human capital vs. low in human capital.

We embed our five hypotheses in a multilevel model as shown in Fig. 1. In the unfolding job search process model, we model human capital to serve two different functions: (1) as a means to employment goal attainment and (2) as a job search resource. Although our multilevel conceptual model illustrates the cross-level effects of human capital on dynamic job search process, we clarify here that we worded some of our hypotheses as pertaining to direct effects of human capital (Hypotheses 1, 2, and 4) to convey that we are actually testing the effect of person-level human capital on the between-person variance component of employment efficacy, job search intensity, and number of interview invitations.

### 3. Method

#### 3.1. Overview

To test our model, we conducted a bi-weekly repeated-measure study on a sample of new labor market entrants. Our focus on job search self-regulation discourages the use of cross-sectional and panel data collection methods. In line with most job search self-regulation studies (e.g., Liu et al., 2014), we adopted a repeated sampling approach to collect from participants multiple observations of employment efficacy, job search intensity and number of interview invitations. To ensure these observations are generalizable across the whole job search duration, we followed earlier studies to tailor each participant's timeline of study participation to his/her personal job search timeline (Sun et al., 2013): once the study commenced, it ended only when he/she accepted an employment offer (see below).

We chose new labor market entrants as the job seeker demographic because it comprised mostly graduating college and university students who are likely preoccupied with not only job search activities but also with academic work and part-time gigs. These job seekers are concurrently acquiring human capital and engaging in job search activities. This satisfies the assumption of equifinal goals in our application of goal system theory to this study. The second reason why we conducted our study on new labor market entrants was to set every job seeker as much as possible on the same starting line due to a similar university degree because most of them have accumulated minimal work experience. Third, at this starting line, these job seekers transitioning from school to work are laying the foundation for a successful and sustainable professional career. Through shaping the jobs and organizations of job seekers early in their career building, their job search behaviors may have a pivotal influence on their professional career entry and enduring effects on their career trajectory (Bidwell, 2017).<sup>2</sup>

We sampled the graduating cohort from the same university faculty to also eliminate differences in industry norms and requirements on human capital for securing job offers. We used academic grades (Grade Point Average; GPA) as our human capital metric. We chose GPA because it is (1) a fairly standardized measure of industry-relevant knowledge and skills and (2) not prone to self-report biases because it is collected from an objective source.

#### 3.2. Transparency and openness

We describe our sampling plan and all measures in the study. Analysis code and results for hypothesis testing are available in the Open Science Framework weblink shown in the beginning of the Results section. We did not preregister this study because data was collected from 2015 to 2018 when preregistration was not stipulated.

#### 3.3. Participants

We recruited 147 participants (63 males,  $M_{\text{age}} = 22.99$ ,  $SD_{\text{age}} = 1.13$ ) from two graduating cohorts ( $N$  in first cohort = 69;  $N$  in second cohort = 78) specializing in business administration or accountancy in a large Singapore university. We compared the two cohorts on focal variables: human capital, conscientiousness, and person-level scores on employment efficacy, job search intensity, and number of interview invitations. The focal variable scores for the two cohorts are comparable so we combined data from both cohorts together. This study is approved by the Institutional Review Board at the National University of Singapore (IRB Ref No. 12-165).

#### 3.4. Procedure

We advertised this study to all business and accountancy students (approximately 1500 students; response rate 9.8 %) at the end of August in their final year of study, and interested participants were briefed on the study procedures. The study was launched on the

<sup>2</sup> We thank an anonymous reviewer for this suggestion.



Fig. 1. Conceptual multilevel model.

first Sunday of October. Close to half of the participants (49 %) reported during the registration phase that they had already begun job search and started the surveys on the first Sunday of October, another 27 % of participants started the surveys on the third Sunday of October, and the remaining 24 % in the months of November to January next year. We decided to launch this study in October based on information gathered from business and accountancy students that recruitment from companies in their industries occurs from fall semester onwards (in contrast, recruitment in other industries e.g., social sciences may not start until winter or spring semesters). Participants completed a one-time *baseline survey* and one *bi-weekly survey* at their first time point in commencing the study. The baseline survey captured participants' self-reports on gender and conscientiousness, whereas the bi-weekly survey captured participants' self-reports on employment efficacy, job search intensity, and number of interview invitations in the prior two weeks. Using a repeated sampling approach, participants received mobile reminders to complete the same bi-weekly survey on the Sunday two weeks later and had until three days to complete the bi-weekly survey before their survey responses were no longer accepted. Participants continued this bi-weekly routine until they accepted a job offer (mean number of bi-weekly surveys completed = 6.56, standard deviation = 4.97). All participants secured and accepted a job offer at the point of graduation. This is consistent with local large-scale surveys conducted on university graduates which showed at the time of the study a healthy labor market for business and accountancy graduates combined (ranging between 80.7 % and 99.0 % permanent employment rate for the two cohorts we examined; [Graduate Employment Survey 2016 \(Published 2017\), 2017](#); [Graduate Employment Survey 2018 \(Published 2019\), 2019](#)). At the national level, Singapore's overall unemployment rate was 2.1 % in both 2016 and 2018 ([Summary Table: Unemployment, 2022](#)).

We obtained information on participants' human capital from another data source. With permission from the university administration, we retrieved the GPA scores of all participants at point of graduation, which served as proxy of human capital.

### 3.5. Measures

#### 3.5.1. Employment efficacy

We adapted reemployment efficacy scale from Wanberg et al (2010) to measure employment efficacy. Participants evaluated three items on a Likert-scale ranging from 1 = *strongly disagree* to 5 = *strongly agree* to indicate their agreement with each statement concerning their confidence in “finding a job if I had looked”, “finding a job that I like” and “getting a good paying job” in the previous two weeks. Internal consistency values averaged across 24 weeks was 0.86.

#### 3.5.2. Job search intensity

We adapted Blau's (1994) job search behavioral instrument to measure job search intensity. Participants evaluated nine items on a Likert-scale ranging from 1 = *never* to 5 = *always* to indicate the frequency of engaging in preparatory (e.g., “prepared or revised your resumes”) and active job search behavior (e.g., “filled out a job application”) in the previous two weeks.

Prior to conducting the study, we consulted eight prospective students on their choice of job search behaviors among Blau's original scale comprising eleven items. We eliminated two items “Contacted an employment agency or executive search firm” and “Telephoned a prospective employer” because all students perceived these two behaviors as irrelevant to their job search. Given the repeated measures research design of this study, we shortened the job search intensity scale from eleven items to nine items to minimize participant fatigue. Internal consistency values averaged across 24 weeks was 0.79.

#### 3.5.3. Number of interview invitations

In line with previous studies (e.g., [MacGowan et al., 2022](#); [Wanberg et al., 2012](#)), participants responded to a single item “How many interview invitations did you receive in the past two weeks? If you did not receive any interview offer, please indicate 0”. Responses ranged from 0 to 9. We square-rooted the scores due to their nonnormal distribution (before transformation: skewness = 2.45, kurtosis = 9.32; after transformation: skewness = 0.76, kurtosis = -0.55) for use in main analyses.

#### 3.5.4. Human capital

Participants' GPA score (with the maximum score being 5.0,  $M = 4.11$ ,  $SD = 0.35$ ) at point of graduation was used to indicate the academic caliber of participants. This data was obtained upon request from the university administration, and matched with data in the Job Search Survey using participants' matriculation records.

Understandably, human capital encompasses more than GPA scores. Work tenure and technical competencies also exemplify human capital (Wanberg et al., 2002). In our university undergraduate sample, professional work experiences were likely negligible while assessment of technical competencies might be biased by participants' university specializations and the types of jobs they were interested in. Participants were studying in the same faculty in the same university, so in this study GPA scores represented a fairly standardized metric of human capital and demonstrated sufficient variability. Furthermore, the job positions participants were applying to are likely specific to university specialization (e.g., marketing graduates mostly apply to marketing job openings and not engineering and accountancy job openings). Graduating class of degree (e.g., first/second/third class, distinction/merit/pass, cum laude/magna cum laude/summa cum laude) based on GPA scores would be one differentiating factor among our participants. Finally, Singapore, the society which participants were residing in, strongly prioritizes academic achievements because of its strong meritocratic economic and labor systems (Wong, 2022). This also characterizes most companies that participants applied to for jobs<sup>3</sup> (Ang, 2019). Therefore, overall academic grade is a key differentiating factor among graduating students from university.

### 3.5.5. Control variables

We controlled for two between-person variables and two within-person variables in main analyses. First, we controlled for participants' gender (coded 0 = male and 1 = female). Second, as potential correlate of GPA and job search success, we controlled for conscientiousness using a nine-item measure from Benet-Martínez and John (1998; sample item: "does a thorough job";  $\alpha = 0.85$ ). Participants responded to the dispositional measure on a Likert-scale ranging from 1 = never to 5 = always. Third, because we obtained job search data throughout the academic year, we controlled for participant session using their personalized start date (ranging from *Fortnight 1* to *Fortnight 26*). As example, if one participant started the surveys on the third week of October and completed five bi-weekly surveys, we coded her observations as *Fortnight 2* to *Fortnight 6*. We acknowledged that job search behaviors fluctuate over the academic year (Sun et al., 2013), but we were disinterested in temporal trends. We also controlled for prior direct effects in focal outcome variable in every analysis to permit more stringent hypothesis testing.

### 3.6. Analytic approach

Given the 1090 bi-weekly observations ( $n_{\text{first cohort}} = 441, n_{\text{second cohort}} = 649$ ) were nested within participants, we conducted multilevel path analyses using MPlus 8.8 (Muthén & Muthén, 1998–2013). Prior to main analyses, we ran two sets of preliminary analyses. First, we ran null models to examine the multilevel structure of all within-person variables. There was substantial within-person variance in employment efficacy (56.13 %), job search intensity (46.81 %), and number of interview invitations (78.97 %). These results substantiated the use of multilevel path analyses.

Second, we conducted multilevel confirmatory level analyses to assess discriminatory validity between employment efficacy and job search intensity. The other focal variables were either self-reported using single item (number of interview invitations) or singular objective metric (GPA). We tested a two-factor model where employment efficacy and job search intensity were modelled as first-order latent factors. Results showed that employment efficacy and job search intensity are distinct from each other,  $\chi^2(26) = 59.32$ ; CFI = 0.98; RMSEA = 0.03; SRMR<sub>within</sub> = 0.03. An alternative one-factor model where employment efficacy and job search intensity loaded onto a single factor exhibited inferior fit,  $\chi^2(28) = 901.22$ ; CFI = 0.49; RMSEA = 0.17; SRMR<sub>within</sub> = 0.19,  $\Delta\chi^2(2) = 491.71, p < .001$ .

After these preliminary analyses, we proceeded with main analyses. In these analyses, we modelled relationships among focal variables: employment efficacy and job search intensity at time  $t$ , and number of interview invitations at time  $t + 1$ .<sup>4</sup> We centered scores for these variables around the average of each person's mean score, and scores for human capital, gender and conscientiousness around the average of the sample's mean scores (Singer & Willett, 2003).

## 4. Results

Table 1 presents the descriptive statistics, reliabilities, within- and between-person correlations. Table 2 presents the multilevel path analysis results. Results for all hypotheses testing are accessible in MPlus output format on [https://osf.io/jvs5w/?view\\_only=7d3b36ad577c41a08ea54c1d2a8671e5](https://osf.io/jvs5w/?view_only=7d3b36ad577c41a08ea54c1d2a8671e5).

Hypothesis 1 focuses on the positive effect of human capital on within-person employment efficacy. Regressing employment efficacy<sub>time  $t$</sub>  on all control variables and GPA (Table 2, Model 1), GPA did not predict employment efficacy,  $\gamma = -0.003$ ,  $SE = 0.15, p = .99$ . Hypothesis 1 did not receive support.

Hypothesis 2 considers the negative effect of human capital on within-person job search intensity. We regressed job search intensity<sub>time  $t$</sub>  on all control variables and GPA (Table 2, Model 2). GPA negatively predicted job search intensity<sub>time  $t$</sub> ,  $\gamma = -0.36$ ,  $SE = 0.14, p = .008$ . This result lent support to Hypothesis 2.

<sup>3</sup> We direct readers to local press articles that discuss the obsession with academic qualifications among Singaporean university students and employers (Ang, 2022; Co, 2019).

<sup>4</sup> Job seekers may not receive interview invitations in the immediate fortnight after sending job applications because companies may take a few weeks to review job applications and send out invitations. We hence used a longer time lag between job search period and receiving interview invitations: we summed the number of interview invitations received in the one-month window after current observation to be the lagged observation in interview invitations (i.e., number of interview invitations at time  $t + 1$ ).



**Table 1**  
Means, standard deviations, correlations and reliabilities for within- and between-person variables.

Variable	M	SD	1	2	3	4	5	6	7	8
Within-person										
1. Participant session	6.56	4.97	–	<b>.07</b>	.004	<b>.08</b>	<b>.08</b>			
2. Employment efficacy	2.88	0.86	–.06	<i>(.86)</i>	<b>.11</b>	<b>.12</b>	<b>.18</b>			
3. Job search intensity	2.38	0.72	–.11	<b>.20</b>	<i>(.79)</i>	<b>.22</b>	–.02			
4. Interview invitations	0.72	1.11	–.01	<b>.14</b>	<b>.23</b>	–	<b>.25</b>			
5. Employment offers	0.11	0.33	–.25	<b>.26</b>	.02	<b>.27</b>	–			
Between-person										
6. Gender	1.57	0.49	–.12	–.10	–.02	–.10	–.06	–		
7. Conscientiousness	3.63	0.59	.03	.09	<b>.19</b>	.01	–.09	.03	<i>(.85)</i>	
8. GPA	4.11	0.35	.12	.07	–.13	<b>.18</b>	–.10	–.21	–.003	–

Note. Bolded values reflect  $p < .05$ , italicized values reflect  $.05 < p < .10$  (two-tailed). Reliability coefficients in diagonals are averages of reliabilities in repeated observations except conscientiousness which was measured at baseline. Correlations above the diagonal are based on within-person observations, and within-person  $n = 1090$ . Correlations below the diagonals are based on either aggregated scores of repeated observations or between-person observations and between-person  $N$  ranges from 136 to 147. Gender was coded 1 for men and 2 for women. Statistics on interview invitations and employment offers were calculated prior to square-root transformation.

**Table 2**  
Multilevel path model tests and results.

Variable	Model 1: Employment efficacy at time $t$	Model 2: Job search intensity at time $t$	Model 3: Job search intensity at time $t$	Model 4: Interview invitations at time $t + 1$	Model 5: Interview invitations at time $t + 1$	Model 6: Employment offers at time $t + 2$	Model 7: Employment offers at time $t + 2$
	$\gamma$ (SE)	$\gamma$ (SE)	$\gamma$ (SE)	$\gamma$ (SE)	$\gamma$ (SE)	$\gamma$ (SE)	$\gamma$ (SE)
Intercept	<b>2.92</b> (0.06)	<b>2.32</b> (0.05)	<b>2.32</b> (0.05)	<b>0.77</b> (0.06)	<b>0.77</b> (0.06)	<b>0.25</b> (0.03)	<b>0.25</b> (0.03)
Within-person predictors and control variables							
Participant session at time $t$	<b>0.02</b> (0.01)	<i>0.01</i> (0.01)	<i>0.01</i> (0.01)	<b>0.03</b> (0.02)	<b>0.04</b> (0.01)	<b>0.03</b> (0.01)	<b>0.03</b> (0.01)
Employment efficacy at time $t$			<i>0.06</i> (0.03)				
Job search intensity at time $t$					0.05 (0.09)		
Interview invitations at time $t + 1$							0.02 (0.02)
Control for direct effects							
Employment efficacy at time $t - 1$	<i>0.09</i> (0.06)						
Job search intensity at time $t - 1$		<b>0.24</b> (0.05)	<b>0.24</b> (0.05)				
Interview invitations at time $t$				–0.04 (0.06)	–0.07(0.06)		
Employment offers at $t + 1$						–0.04 (0.07)	–0.04 (0.07)
Between-person predictors and control variables							
Gender	–0.04 (0.12)	–0.11 (0.10)	–0.11 (0.10)	–0.04 (0.14)	–0.04 (0.14)	0.02 (0.06)	0.02 (0.06)
Conscientiousness	0.05 (0.10)	<b>0.18</b> (0.08)	<b>0.18</b> (0.08)	0.09 (0.09)	0.09 (0.09)	0.02 (0.05)	0.02 (0.05)
GPA	–0.00 (0.15)	– <b>0.32</b> (0.13)	– <b>0.32</b> (0.13)	<b>0.32</b> (0.16)	<b>0.32</b> (0.16)	–0.01 (0.08)	–0.01 (0.08)
Cross-level interaction effects							
Employment efficacy $\times$ GPA score			– <b>0.21</b> (0.09)				
Job search intensity $\times$ GPA score					0.19 (0.31)		
Interview invitations $\times$ GPA score							–0.07 (0.06)
Level 1 residual variance	0.37	0.26	0.26	1.11	1.06	0.13	0.13
Pseudo-R <sup>2</sup> (Level 1)	.02	.06	.08	.01	.06	.07	.07
Level 2 residual variance	0.33	0.20	0.20	0.22	0.23	0.07	0.07
Pseudo-R <sup>2</sup> (Level 2)	.003	.11	.10	.06	.03	.00	.00

Note. Bolded values reflect  $p < .05$ , italicized values reflect  $.05 < p < .10$  (two-tailed).

**Hypothesis 3** states that human capital negatively moderated the within-person relationship between employment efficacy and job search intensity. To test **Hypothesis 3**, we added employment efficacy<sub>time t</sub> and cross-level interaction term employment efficacy<sub>time t</sub> × GPA (Table 2, Model 3). GPA negatively moderated the within-person relationship between employment efficacy and job search intensity,  $\gamma = -0.18, SE = 0.09, p = .04$ . We proceeded with simple slope analysis. For job seekers who had high GPA scores (i.e., 1 SD above mean), employment efficacy did not predict job search intensity,  $\gamma = -0.02, SE = 0.05, p = .72$ ; for job seekers who had low GPA scores (i.e., 1 SD below mean), employment efficacy positively predicted job search intensity,  $\gamma = 0.13, SE = 0.04, p = .003$ . The difference in simple slopes was significant,  $\gamma = -0.15, SE = 0.06, p = .02$ . Fig. 2 illustrates this cross-level moderating effect.

We turned to test **Hypothesis 4** which posits the positive effect of human capital on number of interview invitations at within-person level. We regressed interview invitations<sub>time t+1</sub> on all control variables and GPA (Table 2, Model 4). Supporting **Hypothesis 4**, GPA positively predicted number of interview invitations,  $\gamma = 0.57, SE = 0.29, p = .049$ .

**Hypothesis 5** focuses on human capital as a cross-level moderator of the within-person relationship between job search intensity and subsequent number of interview invitations. We added job search intensity<sub>time t</sub> and cross-level interaction term job search intensity<sub>time t</sub> × GPA as predictor of interview invitations<sub>time t+1</sub> (Table 2, Model 5). GPA did not moderate the within-person lagged relationship between job search intensity and number of interview invitations,  $\gamma = 0.18, SE = 0.43, p = .67$ . So, this result did not support **Hypothesis 5**.<sup>5</sup>

#### 4.1. Supplementary analyses

For exploratory purposes, we also administered in every biweekly survey a single-item measure on the number of employment offers: “How many job offers did you receive in the past two weeks? If you did not receive any job offer, please indicate 0”. Participant responses ranged from 0 to 3. We square-rooted the scores due to their nonnormal distribution (before transformation: skewness = 3.00, kurtosis = 10.02; after transformation: skewness = 2.58, kurtosis = 4.85) for use in supplementary analyses. This variable enables us to test some of our ideas with a more objective (less perceptual) metric.

After job seekers progress past the interview stage, job search intensity may weigh lesser in determining if an employment offer is extended. Interview performance depends on impression management, verbal and non-verbal behaviors (Gilmore et al., 1999; Judge et al., 2000; Riggio & Throckmorton, 1988). Positive pre-interview impressions arising from desired human capital qualities in curriculum vita may perpetuate because recruiters' judgments of job candidates on interview performance may be biased by the qualities candidates initially portrayed (i.e., their educational qualifications and work experience; Cable & Gilovich, 1998). Alternatively, human capital qualities may not affect post-interview selection because the candidate pool has shrunken in the interview stage and candidates are more or less the same in human capital qualities. Other attributes like interpersonal skills, person-job fit, impression management (Gilmore et al., 1999), interview performance (Riggio & Throckmorton, 1988), or performance in assessment centers and other selection tasks may be more important for deciding whether candidates proceed to subsequent selection stages. We kept this investigation open-ended and tested if GPA predicted the number of employment offers aggregated at the within-person level, and if GPA affected the within-person lagged relationship between number of interview invitations and number of employment offers.

We regressed employment offers<sub>time t+2</sub> on all control variables, GPA (Table 2, Model 6). We did not find GPA to predict subsequent number of employment offers,  $\gamma = -0.01, SE = 0.08, p = .92$ . Following earlier analyses, we included interview invitations<sub>time t+1</sub>, cross-level interaction terms interview invitations<sub>time t+1</sub> × GPA (Table 2, Model 7). GPA did not moderate the within-person lagged relationship between interview invitations and employment offers,  $\gamma = -0.07, SE = 0.06, p = .26$ .

## 5. Discussion

### 5.1. Theoretical implications

Our findings advance the job search literature in meaningful ways. First, our study continues the spirit of Wanberg et al. (2002) in modelling human capital to predict job search success. We improved upon this investigation by suggesting a nuanced narrative on the role of human capital and testing its effects in an unfolding job search self-regulation process. In doing so, we found GPA to decrease job search intensity yet it increases the number of interview invitations. These seemingly opposing effects explain why job search scholars were unable to identify stable effects of human capital in the job search process. The benefit of human capital on proximal job search success may be counterbalanced by its effect on reduced job search engagement. By separating the two stages of unfolding job search process, our study explains the previously reported small and inconsistent effects of human capital on job search success. We contribute to understanding of resources in job search by pointing out and testing the negative effects of human capital for job search self-regulation.

Second, our study goes beyond prior thinking by proposing and teasing apart assurance and interference effects as two reasons why human capital negatively predicts job search intensity. Related to the *assurance* effect, we reasoned that job seekers high in GPA

<sup>5</sup> As robustness checks, we also conducted the same analyses for Hypotheses 1 to 5 without including the four control variables. Results for all analyses remained the same except **Hypothesis 2**, in which the effect of GPA on job search intensity turned marginally significant,  $\gamma = -0.23, SE = 0.12, p = .054$ .

<sup>6</sup> Similar to considerations on lagged interview invitations, job seekers might receive employment offers at a much later notice. At the same time, we could not use observations which were too temporally distant from the other present observations as this limited the number of usable lagged observations. We summed the number of employment offers received between two and six weeks after the present observation as the lagged observation in employment offers (employment offers<sub>time t+2</sub>).

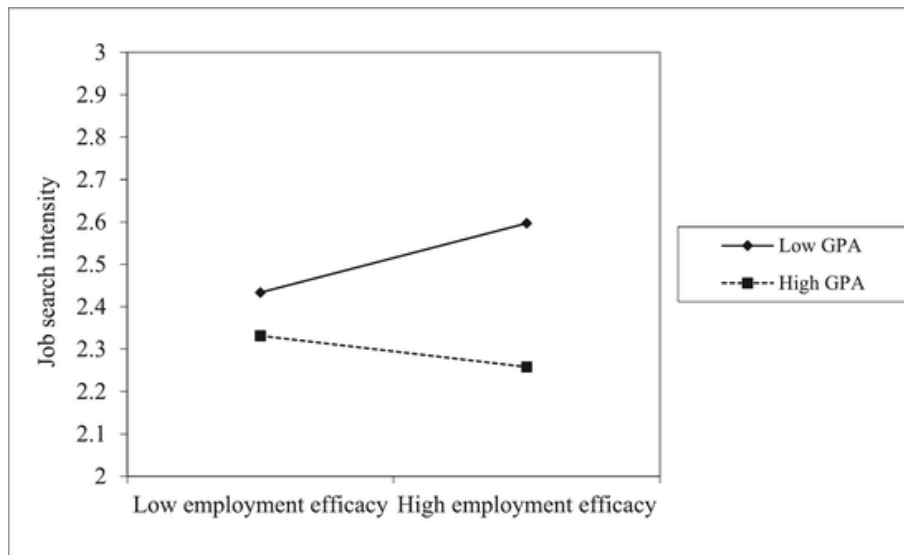


Fig. 2. GPA moderates the within-person relationship between employment efficacy and job search intensity.

are conscious of the competitive advantages that academic achievements confer. Contradicting our expectation, GPA did not positively predict employment efficacy. Job seekers who perform well academically do not feel more confident in their capacity to obtain desired employment than job seekers who perform less satisfactorily. We offer three post-hoc reasons for this non-significant finding. First, job seekers high in GPA may perceive their laid-back search behaviors to constrain their job search success, and question their overall ability to secure desired employment. Second, they may have higher career aspirations owing to their high GPA, which may taper their expectancies of future employment and counteract the competitive advantages of their good academic records. Third, they may not perceive GPA as relevant to employability and so they have negligible expectancies that their high GPA helps them to stand out from the competition during selection.

Not finding empirical support for the assurance effect of human capital on job search intensity leaves the *interference* effect as the more plausible reason why human capital negatively affects job search intensity. Unlike job seekers low in GPA, job seekers high in GPA arguably prioritize human capital investment over job search engagement and prefer to direct scarce attentional and cognitive resources to academic tasks. Using the language of goal system theory, there is a trade-off between the means of employment goal attainment: maintaining good academic grades versus expending effort on job search tasks. GPA is gradually moulded over several years of university enrolment and is largely immune to vacillations in the final year of study. However, high GPA job seekers may still strive to maintain an impeccable grade score and are hesitant to slacken in their academic tasks given the great personal importance they attach to academic achievements (Marsh & Martin, 2011; Wong, 2022). In contrast, low GPA job seekers may not be hopeful that studying hard will significantly impact on their GPA scores, and they channel more enthusiasm towards job search goal pursuit. This finding contributes to a growing research stream on the preoccupations of job seekers and individual circumstances that perpetuate these preoccupations, that can have far-reaching implications on job search self-regulation (e.g., Fang & Saks, 2020).

Third, our study found GPA to negatively moderate the within-person relationship between employment efficacy and job search intensity. In line with our expectations, individual differences in human capital promote different self-regulation approaches to within-person vacillations in employment efficacy. For low GPA job seekers, high within-person employment efficacy stimulates increments in job search intensity. For high GPA job seekers, employment efficacy was inconsequential to job search intensity. The relationship between employment efficacy and job search intensity continues to be of great interest to job search scholars (e.g., da Motta Veiga & Turban, 2018). Our finding advances this literature by ascertaining human capital as another boundary condition of the employment efficacy-job search intensity relationship. Accordingly, our study also identifies individual circumstances that may inhibit job search engagement: 1) human capital investment for high GPA job seekers when their employment efficacy is high and 2) negative cognitions and emotions in job search activities for low GPA job seekers when their employment efficacy is low.

Using academic achievement as human capital metric, we also found a positive effect of GPA on the number of interview invitations. The country that this study was conducted in exhibits high levels of grade consciousness. Many organizations that participants applied to – presumably local – show bias towards candidates with better academic achievements (Ang, 2019). Though academic achievement has negligible impact on employment status and employment speed (Van Hooff et al., 2021; Wanberg et al., 2002), it does increase the odds of landing on interview invitations. This finding is in line with recent job search studies that demonstrate demographic advantages in job search (e.g., DeOrtentiis et al., 2021).

Strictly from a job search research perspective, the double-edged sword metaphor of human capital makes sense because academic tasks do interfere with job search activities. Yet, from a broader career development research perspective, sustained human capital investment may be a reasonable tradeoff for reduced job search intensity in the short term when we consider its benefits on interview

invitations in the short term and career success in the long term.<sup>7</sup> Nonetheless, job search intensity is still an essential phase in career building for most people. This is because in order to land on a job almost all the time, job seekers need to indicate interest to organizations for job positions they perceive as desirable or fitting for their career development. While job seekers low in human capital are compelled to maximize job search intensity, job seekers high in human capital still need to *minimally* engage in job search tasks to keep abreast of and consciously apply to key job openings.

### 5.2. Implications for practice

Our findings have implications for job seekers and career counsellors by helping them reflect on the role of academic and vocational commitments in job search and seeking new employment. First, *job seekers* should understand that although academic and vocational pursuits have their merits, these pursuits may unintentionally decrease their job search engagement. Drawing from our finding on the negative effect of human capital acquisition on job search intensity, we advise job seekers to exercise caution in not allowing academic or vocational activities to distract them from working on job search tasks. Human capital investment is a gradual and lengthy process, so we encourage them to take “a breather” from studying or working to fully commit themselves to job search activities.

*Career counsellors* may play an important role in the search process for job seekers. In guiding job seekers who exhibit strong education and work credentials, we suggest career counsellors to remind job seekers to set employment goal at the forefront of their daily agenda. In guiding job seekers who are discouraged by the constraints of poor qualifications in job search, career counsellors should reassure them to be optimistic on their employability and persist in the job search grind.

Our study results can also be fruitfully used in *university career centers*. These centers usually have access to graduating students' academic records. Using this information, university career centers are able to send social media messages to graduating students, subtly customized according to expected graduating class of honor. These customized social media messages can focus on job search advice. That is, they can remind students with expected higher class of honor to spend more time on job search tasks with accompanying suggestions on time management skills. Conversely, students with expected lower class of honor can be encouraged to keep their spirits up with accompanying stories on job search success among students varying in academic grades.

### 5.3. Limitations

This study has several limitations. First, one may argue that GPA may be too coarse a metric of human capital, given that human capital also comprises informal work, internship experiences, industry-specific knowledge, technical competencies, and extra-curricular activities. Notwithstanding, our study shows that GPA is consequential for job search behaviors and proximal job search success. We attribute this to the high level of grade consciousness in Singaporean society. Many people in east Asian societies like China and South Korea are equally preoccupied with educational achievements (Boman, 2022), which may strengthen its effects on job search processes and outcomes in these societies. We speculate that the effects of GPA and educational qualifications on job search processes and employment outcomes may be weaker in other societies (e.g., the United States of America and European countries), wherein other human capital qualities like internship experiences and extra-curricular activities carry more weight in employers' perceptions (Chia, 2005; Gault et al., 2010). Overall, we suggest that human capital is important across cultures but the specific metrics to operationalize it may vary among cultures. Therefore, we emphasize that our study results should be interpreted as effects of human capital – instead of academic grades per se – on job search. Accordingly, we recommend future studies to measure human capital using other metrics (i.e., following Wanberg et al., 2002). At the very least, scholars should adopt human capital measures that are relevant to employability perceptions in their particular culture.

Second, although we showed that human capital interferes with job search behaviors and decreases job search intensity, we did not dig into other aspects of job search processes like job search quality. Job search quality refers to the effective use of goal setting, plans making, goal persistence and reflection in job search (Van Hoof et al., 2013). Although job seekers high in human capital expend less effort on preparatory and active job search activities (e.g., spend less time searching for job openings and submit less job applications) than job seekers low in human capital, their job search quality cannot be assumed to be similarly deficient. Human capital may positively predict job search quality because job seekers high in human capital may still be engaged in job search but they are strategically channelling effort towards developing goals and making plans than working on job search behaviors.<sup>8</sup> Given that conscientiousness predicts both GPA and job search quality (Stremersch et al., 2021), we wonder whether variance in job search quality can still be explained by human capital once conscientiousness is controlled for. We encourage future job search studies to measure job search quantity (i.e., job search intensity), job search quality and conscientiousness.

### 5.4. Directions for future research

Other than human capital, job seekers may also rely on social capital to enhance their job search success. Social capital refers to benefits accessible through an individual's relationship networks (Nahapiet & Ghoshal, 1998). Job search scholars have yet to directly test the effects of social capital (e.g., indegree centrality, structural holes) on job search self-regulation, but many job search studies have promoted the importance of social networks and networking to job search success (Bian, 1997; Van Hoye et al., 2009; Wanberg

<sup>7</sup> We thank the editor and an anonymous reviewer for this suggestion.

<sup>8</sup> We thank an anonymous reviewer for this suggestion.

et al., 2000). As an informal job search technique, job seekers consult network ties for job search advice and employment-relevant information. We speculate that social capital may have similar double-edged effects as human capital on job search self-regulation. It may be instrumental for job search success because job seekers may receive recommendations from their network ties on suitable job positions, but it may interfere with job search task commitments because they also need to work on building and maintaining their social networks. We recommend future job search studies to test these speculations.

Future research may also shift attention to job seeker categories other than new labor market entrants. For instance, human capital acquisition may differentially impact on employed or unemployed job seekers. Employed job seekers may rely more on their work credentials instead of academic qualifications to evaluate their employability and adjust their job search behaviors accordingly. An intriguing question is whether they will exhibit similar coasting behaviors when they perceive themselves as having strong work credentials, particularly when finding new employment is not of utmost urgency. In contrast, unemployed job seekers may feel greater pressure to update their skill repertoire and enrol in upskilling programs to increase relevance of skillsets in the competitive labor market. For this group of job seekers, the effects of upskilling and part-time gigs on job search intensity and employment outcomes are especially important avenues for future research. Similar to the arguments put forth in our study, upskilling and gigs are paramount to enriching human capital but they may interfere with job search intensity. How can unemployed job seekers balance these conflicting task demands and persist in the job search grind? Do part-time gigs offer a new career pathway for job seekers and do these job seekers then become less committed to their initial new employment goal? Do upskilling programs have any downside to job search self-regulation process? Future studies can put these important research questions to the test.

Finally, we should consider whether effects of human capital depend on labor market demand. Scarcer labor markets may require lower job search intensity to secure employment, and this effect may be more pronounced for people with higher human capital during an economic recession. In our study's time frame, unemployment rates were consistently low in Singapore and therefore we could not factor in such broader macroeconomic context factors. We nonetheless encourage future research to consider labor market conditions as an important driver of job search behaviors and outcomes (e.g., Dineen et al., 2017).

## 6. Conclusion

Traditional research on human capital suggests that it enhances employment success. Our research proposes that it may also have negative effects on job search self-regulation. Our multi-source repeated-measures study confirms that human capital acts as a double edged sword: Although it is instrumental for obtaining interview invitations, it interferes with self-regulatory behaviors in job search.

## Uncited references

## CRedit authorship contribution statement

**Jomel Wei Xuan Ng** : Conceptualization, Methodology, Formal analysis, Investigation, Writing – original draft, Writing – review & editing. **Zhaoli Song** : Conceptualization, Resources, Writing – review & editing, Funding acquisition. **Filip Lievens** : Conceptualization, Writing – review & editing.

## Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

## Data availability

Data will be made available on request.

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