The Relationship between Family Socioeconomic Status and Career Outcomes:

A Life History Perspective

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Family Socioeconomic Status, Job Search, and Job Search Outcomes:

A Life History Perspective

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Abstract

Based on the life history perspective, this study tested a serial mediation model in which family SES related to person-job fit via resource scarcity, career exploration, and goal persistence. We expected that when seeking employment, higher SES students would perceive lower resource scarcity, and, in turn, adopt more adaptive career behaviours (i.e., career exploration and goal persistence) to maximize career success, which would then lead to better person-job fit upon graduation. Using a sample of 224 final-year students (mean age 21 years; 77% male), we found, as expected, that higher SES was related to more career exploration and goal persistence via lower perceived scarcity, and that exploration and persistence were related to better person-job fit. In addition, higher SES was indirectly related to person-job fit via scarcity and the two career behaviours. The findings highlight the importance of family SES in young people's career development.

Keywords: family socioeconomic status; career exploration; goal persistence; resource scarcity; person-job fit; life history perspective

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For young people, especially those from lower socioeconomic status (SES) families, higher education is a key to upward social mobility (Chapman & Austin, 2002). Previous studies have shown that family background plays an important role in university/college graduates' first job choice and job attainment, and these, in turn, influence their later career development and success (Macmillan et al., 2015). For example, higher SES graduates are more likely to be more satisfied at graduation, obtain a job, and have a higher salary initially as well as 4 and 10 years later (Salas-Velasco, 2007; Witteveen & Attewell, 2017).

Major career theories, such as Holland's (1959) career choice theory, Gottfredson's (2005) theory of circumscription and compromise, and Lent et al.'s (2000) social cognitive career theory, propose potential explanations for these inequalities. For example, the advantages provided by higher SES families can translate into greater interest in higher prestige jobs and more access to learning and internship resources. In addition, the newer psychology of working theory (PWT) highlights that social status limits a person's perception of work choice (i.e., work volition), has an impact on obtaining and engaging in decent work, and, thereby, influences career attainment (Duffy et al., 2016). However, family SES is still under-represented in career development research and practice; a more sophisticated understanding of the relationships between SES and career development processes and outcomes is needed (Flores et al., 2017).

Life history theories (e.g., life history, Stearns, 1989; pace-of-life, Réale et al., 2010) provide a motivational perspective to understand how family background influences career outcomes via developed attitudes and behaviours. When seeking employment, young people perceive a sense of uncertainty and threat (e.g., obtaining a job within time constraints, competing for limited job vacancies), and have to make trade-offs to maximize success when

allocating their resources to different career activities (Melloy et al., 2018). Family background, more specifically, the living environment when growing up, shapes the pattern of trade-offs that young people make (Kaplan & Gangestad, 2005). That is, young people from different SES backgrounds are likely to invest in different career activities to meet their respective needs, and, consequently, have different outcomes (Van Hoye, 2013).

In the current study, we contribute to the career literature by adopting a life history perspective to examine how family SES relates to important career outcomes. We tested a serial mediation model, in which family SES related to perceived person-job fit upon graduation via resource scarcity and career exploration and job goal persistence.

Life history theory

Life history theories (e.g., life history, Stearns, 1989; pace-of-life, Réale et al., 2010), which are derived from evolutionary psychology, have been extended recently to explain human decision-making processes and behaviours (Griskevicius et al., 2013). These theories propose that people who grow up in predictable and meaningfully ordered environments (e.g., higher SES families) tend to believe that their future is more predictable and under personal control (Kaplan & Gangestad, 2005). Accordingly, they are more likely to allocate their life resources to activities that can increase long-term payoffs. For example, they might equip themselves with more knowledge and skills (e.g., pursue higher education) and save money for future use (Mittal & Griskevicius, 2014). Alternatively, people who grow up in more chaotic and harsh environments (e.g., lower SES families) are more likely to allocate their resources to meet current needs, such as entering the job market and parenting earlier. This occurs because personal growth and saving resources are less meaningful when the future is beyond the individual's control (Griskevicius et al., 2013; Laran & Salerno, 2013).

Previous studies suggest that the diverging patterns of trade-offs are more likely to emerge when the individual encounters uncertainty and threat (e.g., economic recession;

Mittal & Griskevicius, 2014). This means that in benign situations, when environmental resources are relatively abundant for everyone, people from different backgrounds will tend to behave in a similar manner (Mittal & Griskevicius, 2014). When faced with uncertainty and threat, people perceive the need to compete for scarce resources. This alters their sense of control and triggers different resource allocation decisions; ones that are derived from their family background experiences (Mittal & Griskevicius, 2014).

Life history theories and employment seeking

We extended the application of life history theories to graduate employment seeking. We expected that when facing employment uncertainty (i.e., seeking and applying for a job), family SES shapes young people's perceptions of resource scarcity in the situation, the trade-offs they make when allocating resources to career activities, and, in turn, influences their career outcomes (i.e., perceived person-job fit upon graduation).

Family SES and career behaviours. Following the life history perspective, when faced with employment uncertainty, young people from higher SES families will perceive more control, and be more likely to invest in career activities that can provide them with long-term gains (e.g., initial and future person-job fit, career satisfaction, and advancement). On the other hand, those who grow up in lower SES families will be more alert to the threat and tend to seek immediate fulfilment (e.g., obtain a job quickly; Mittal & Griskevicius, 2014). Based on this rationale, we proposed two career behaviours that young people might use differentially to realize their respective job goals.

The first is career exploration, which is “the gathering of information relevant to the progress of one's career” (Zikic & Klehe, 2006; p. 393). We expected that higher SES young people would invest more in exploration activities (e.g., gathering information about available jobs, reflecting on what jobs are compatible with personal qualities and are truly desired). This is because at the stage of seeking employment, career exploration not only

facilitates the development of a job search plan, but also provides young people with career-related knowledge, skills, and resources that are likely to bring long-term, positive career consequences (Praskova et al., 2015). Lower SES students, on the other hand, will invest less in career exploration and more in direct, active job-seeking activities that can maximize immediate success (e.g., applying for jobs, attending interviews; Blau, 1994).

The second career behaviour is job goal persistence, defined as persisting with desired job goals even when confronted with obstacles and barriers (Wrosch et al., 2000). Persistence in goal striving is an adaptive strategy when people feel in control (Wrosch et al., 2000). Thus, when people perceive that goal attainment is predictable and controllable, they will be more confident when tackling barriers and more likely to persist with their initial goals, which, in turn, will lead to better goal attainment (Heckhausen, 1999). This proposition is compatible with life history theories. When seeking employment, higher SES students are likely to feel more in control and be more likely to persist with their desired goals because they see these as having long-term payoffs. Alternatively, lower SES students, who perceive lower personal control, will be less likely to persist with goals that are difficult to achieve, and will be more likely to implement adaptive strategies to obtain a job quickly, for example, by lowering initial goals (Hu et al., 2019).

Relationships between family SES and career behaviours have been examined in previous studies, with family SES measured using both objective and subjective indicators (Flores et al., 2017). Objective indicators include financial, educational, and social resources provided by parents (i.e., parents' educational attainment, income, and job status); subjective SES reflects self-evaluation of their family's social status relative to others in society (Kraus et al., 2012). These studies showed that family SES is not consistently related to either career exploration or goal persistence. For example, some reported that higher SES students spent more time on exploration of vocational self and career possibilities and were more planful

(e.g., Blustein et al., 2002; Gamboa et al., 2013). However, other studies did not find direct associations between SES and career exploration (e.g., Creed et al., 2007; Huang & Hsieh, 2011). Similarly, although some studies found that higher SES young people were more likely to persist and less likely to lower or give up desired goals (Hu et al., 2019), these results did not hold in other studies (e.g., Hu et al., 2020). One explanation is that the relationship might be more likely to emerge when young people are confronted with uncertainty or threat (e.g., employment seeking, career progress setbacks; Mittal & Griskevicius, 2014). Most of the existing studies were conducted in situations of low threat. Another possibility is that there might be important linkages, such as resource scarcity, between SES and career exploration and goal persistence that explain the relationships.

Family SES, resource scarcity, and career behaviours. According to life history theories and previous empirical studies, when faced with economic uncertainty, higher SES people feel that the situation is still controllable and manageable for them, and, thus, continue to invest in long-term goals; lower SES people, on the other hand, perceive less control over the situation, and tend to invest in immediate goals (Griskevicius et al., 2013; Mittal & Griskevicius, 2014). While experimental studies have provided empirical evidence for this proposition (see Mittal & Griskevicius, 2014), it remains unclear why people from different backgrounds have different levels of personal control and make different trade-offs in response to the same uncertainty/threat.

One possible mechanism is the person's perception and interpretation of the uncertainty/threat; it is plausible that young people will evaluate the threat differently, depending on their life histories (Del Giudice et al., 2016). In particular, employment uncertainty might induce a sense of threat (e.g., unemployment at graduation) for everyone in the situation. However, compared to disadvantaged students, those from higher SES families might perceive having relatively more personal resources to cope with the uncertainty, and,

thus, appraise the situation as less threatening. For example, they might perceive more time to seek a desired job (i.e., unemployment at graduation is acceptable; Liu, 2010); they might perceive that more job opportunities are available to them as they have more time for job seeking and have more family networks to provide access to job opportunities (Liu, 2010); or they might perceive greater freedom of work choice despite the constraints or threats (Autin et al., 2017; Blustein et al., 2006). Due to a sense of abundance of personal resources, these young people are likely to have higher personal control and invest more in long-term goals, even when faced with the uncertainty of the situation.

On the other hand, when lower SES young people evaluate the situation, they might perceive having less time for job seeking, as they cannot afford to be unemployed at graduation, and expect fewer job opportunities available for them (Liu, 2010). Accordingly, this sense of scarcity lowers their personal control, and triggers an adaptive decision of investing less in time-consuming career exploration and unattainable goals.

Previous studies have proposed that perceived resource scarcity is a proximal predictor of personal control and adaptive behaviours, and can be induced by uncertainty/threat (Cannon et al., 2019). However, to our knowledge, no research has explicitly tested whether young people from different backgrounds perceive different levels of resource scarcity when facing employment uncertainty. We contribute to the existing literature on life history theories and career development by examining perceived resource scarcity as a mediator between family SES and career behaviours. We were guided by the definition of resource scarcity as perceived discrepancies between a person's current resource level and a higher reference point that they desired or needed (Cannon et al., 2019), and considered resource scarcity in the employment seeking setting to include time scarcity and opportunity scarcity (Liu, 2010).

Consistent with other research based on life history theories, we measured students' perceptions of their childhood family SES and focused on perceptions of family social standing relative to other families (i.e., subjective SES). Previous studies have shown that, compared with objective SES, subjective SES has stronger and more consistent associations with psychological processes (Kraus et al., 2012). We hypothesized that:

H1: The relationships between perceived family SES and career exploration (H1a) and job goal persistence (H1b) are mediated by perceived resource scarcity.

Career behaviours and career outcomes. Previous studies have found that both career exploration and job goal persistence are related to career success. For example, career exploration is related to perceived employability (Praskova et al., 2015) and job satisfaction upon graduation (Werbel, 2000). Similarly, empirical evidence supports the relationship between goal persistence and more rapid career progress, higher expectations of upward social mobility, and higher subjective well-being (Bernardo et al., 2018; Shane & Heckhausen, 2016). Following this, we expected that career exploration and persistence would be related to perceived person-job fit, which is one indicator of career success. Young people who engage more with career exploration are more likely to understand what job suits them best (Forstenlechner et al., 2014). Also, when confronted with obstacles, those who are more persistent with their goals are more likely to actually achieve what they desire (Shane & Heckhausen, 2016). Therefore, we hypothesized that:

H2: Career exploration (H2a) and goal persistence (H2b) are related to better perceived person-job fit.

Family SES and career outcomes: The mediating roles of resource scarcity, career exploration, and goal persistence. Previous empirical studies have found that higher SES graduates obtain better career outcomes; for example, higher starting salary, job prestige, and job satisfaction upon graduation (Liu, 2010). Career scholars have also examined some

potential mediators for these relationships, especially cognitive and motivational mechanisms. For example, family SES is related to career decision-making self-efficacy, outcome expectations, and career aspirations (Thompson & Dahling, 2012).

Following life history theories, we contribute to the current literature by examining a serial mediation model where perceived family SES is related to person-job fit via resource scarcity and career behaviours. First, we expected that higher SES students would perceive more available time and job opportunities, and, thus, would be more likely to invest in career exploration and persist with their goals that are beneficial activities for long-term payoffs. Consequently, this should be related to perceiving they have a better person-job fit upon graduation. For lower SES young people, they are likely to have higher levels of resource scarcity, invest less in career exploration and goal persistence, and, thus, perceive lower person-job fit at graduation. Taken together, we hypothesized that:

H3: The relationship between perceived family SES and person-job fit is sequentially mediated, first by resource scarcity, and then by career exploration (H3a) and goal persistence (H3b).

H4: The relationship between perceived resource scarcity and person-job fit is mediated by career exploration (H4a) and goal persistence (H4b).

Control variables

According to previous studies, graduate academic achievement, gender, and degree discipline are important antecedents to career outcomes. In particular, students with higher Grade-Point Average (GPA) are more likely to have better career outcomes (Turban et al., 2009); male students have advantages in employment seeking (Hoye et al., 2009); and students from different faculties/disciplines differ in employment outcomes (Guan et al., 2013). Thus, GPA, gender, and degree discipline were assessed for inclusion as covariates.

Method

Participants

We invited 286 final year students from one university in Nanjing, China, who had accepted a job for the following year, to participate. Of these, 240 agreed (response rate 83.92%), and 224 were included (some participants did not complete the full survey). There were no missing data in this final sample ($M_{\text{age}} = 21.34$, $SD = 1.34$; 77.20% male).

Participants were science and technology students enrolled in a range of disciplines (e.g., applied physics, information technology, computer science, and aircraft manufacturing engineering). To obtain a proxy for academic achievement, we asked for their GPA during the past four years ($M = 3.04$; $SD = .47$; actual range = 2 to 4.2; possible range = 1 to 5).

Measures

Subjective SES. We assessed students' perceptions of their childhood SES using the MacArthur Scale of Subjective Social Status (Adler et al., 2000). The measure consists of a line drawing of a 10-rung ladder, which is introduced with, "Think of this ladder as representing where people stand in our society. At the top of the ladder are the people who are the most advantaged in terms of money, education, and employment. At the bottom are the people who are the most disadvantaged." Participants indicate where on the ladder they would place their family status when they were growing up, with higher score representing higher perceived family SES (possible range = 1 to 10). Previous research has found this scale to be moderately related to objective SES indicators, such as parents' educational level, job status, and familial income (Shane & Heckhausen, 2013).

Perceived resource scarcity. As there was no existing scale to assess this construct in the employment seeking setting, we generated five items based on reference to the career and more general psychology literature (e.g., Cannon et al., 2019; Liu, 2010) and ratings from researchers and practitioners in career psychology. Sample items are "In the past six months, I felt that I had scarce time to find a job", and "In the past six months, I felt that I had fewer

job opportunities than I desired”. Responses were made on a Likert-type scale (1 = *strongly disagree* to 5 = *strongly agree*), with higher scores representing higher perceived resource scarcity (possible range = 5 to 25). A principal axis factor analysis indicated one clear factor, which accounted for 62.57% of the variance. Factor loadings ranged from .57 to .94, and internal reliability (Cronbach’s α) was .84. In support of construct validity, the scale was associated with all other variables in the study in the expected direction (e.g., with lower perceived family SES, career exploration, goal persistence, and person-job fit; Table 1).

Career exploration. We used the 18-item Chinese version (Xu, 2008) of the Career Exploration Scale (Stumpf et al., 1983). Sample items are “During the past six months, I obtained information on specific jobs or companies”, and “During the past six months, I reflected on how my past integrates with my future career”. Participants responded on a 5-point scale (1 = *never* to 5 = *always*), with higher summed scores indicating more career exploration. Previous studies reported sound reliability with Chinese university graduates (α = .88 to .93), and provided support for validity by demonstrating that scores were related to higher career decision-making self-efficacy and fewer decision-making difficulties (Xu, 2008; Zhang & Huang, 2018). Alpha was .96 for the current sample.

Goal persistence. We modified the 5-item Persistence in Goal Striving Scale (Wrosch et al., 2000) to assess job goal persistence when seeking employment (e.g., “When faced with a bad situation, I do what I can do to change it for the better” was changed to “When faced with a bad situation regarding the jobs that I have been striving for, I did what I could do to change it for the better”). Participants responded on a 5-point scale (1 = *strongly disagree* to 5 = *strongly agree*), with higher summed scores indicating more persistence. Previous studies reported sound reliability (α = .71 to .90) with Chinese university students, and found that the scale related to less goal disengagement and more positive career outcomes (Hu et al., 2020; Xu et al., 2006). In the current sample, α = .94.

Perceived person-job fit upon graduation. We used the 4-item Chinese version (Jiang, 2016) of the Person-Job Fit Scale (Saks & Ashforth, 1997). A sample item is, “My knowledge, skills, and abilities match the requirements of the job”. Participants responded on a 5-point scale (1 = *strongly disagree* to 5 = *strongly agree*), with higher summed scores indicating better fit. Jiang (2016) reported good reliability with Chinese university students ($\alpha > .80$) and provided support for validity by demonstrating that fit was related to lower levels of job boredom. Alpha was .87 in the current sample.

Procedure

The study was conducted with the approval of the first author’s university ethics’ committee. The administration department of the university that was involved granted permission to approach course convenors to collect data. These convenors provided brief information about the study and the link to the online survey for students in class. Volunteer respondents completed the survey online. Data were collected at the end of second semester in the fourth year of their degree (i.e., just before graduation).

Results

Data management

We used structural equation modelling (AMOS V24; maximum likelihood estimation) to assess a serial mediation model, where perceived family SES related to lower perceived resource scarcity, which related to greater career exploration and goal persistence, and, in turn, better perceived person-job fit. To reduce the number of parameter estimates and increase model parsimony, we used an item-to-construct balance approach to parcel items for the three scales of scarcity, career exploration, and goal persistence (three parcels per variable; α s for the parcels = .61 to .89; Little et al., 2002).

Prior to testing the mediation model, a measurement model was assessed to confirm that the four latent variables (i.e., resource scarcity, career exploration, job goal persistence, and

person-job fit) could be represented by their parcels or items and were independent of one other. To determine the indirect effects in the mediation model, the 95% bias-corrected confidence intervals (CIs; 1000 bootstrap samples) were calculated. An indirect effect exists when the CIs do not contain zero.

Preliminary analyses

We first examined variables for skewness (standardized skew statistics between -1 and 1) and kurtosis (between -2 and 2), finding no problems (Gravetter & Wallnau, 2014). The expected 4-factor measurement model yielded a good fit to the data $\chi^2(59) = 99.18, p = .01$; CFI = .98, TLI = .98, RMSEA = .06 [.04, .07], SRMR = .04 (Hair et al., 2010). This model also showed a better fit than all alternative models (comparative results are available on request from the first author), and, thus, was accepted as the best model. All factor loadings were $> .63$ (range: .63 to .98) and correlations among the latent variables mirrored those among the scale totals (r s ranged from -.29 to .55, p s $< .001$; see Table 1).

From the bivariate correlations (see Table 1), and as expected, higher perceived family SES was related to lower perceived resource scarcity, and scarcity was related to less career exploration and job goal persistence, and to lower person-job fit. Career exploration was related to more goal persistence, and higher exploration and persistence were related to better person-job fit. In addition, higher perceived family SES was related to lower career exploration, but showed no significant bivariate associations with goal persistence and person-job fit.

Age and GPA were not related to any study variables (r s = -.05 to .02, p s $> .05$). Gender was coded as a dummy variable (1 = *female*, 0 = *male*). Female students perceived higher resource scarcity ($M_{\text{female}} = 3.01, M_{\text{male}} = 2.52, t = 3.86, p < .001$; Cohen's $d = .62$) and lower person-job fit ($M_{\text{female}} = 3.74, M_{\text{male}} = 4.06, t = -3.15, p = .002$; Cohen's $d = -.50$). Study discipline was recoded as four ($k - 1$) dummy variables (reference group = discipline of

electronics and information engineering). ANOVAs indicated that students from different disciplines did not differ on any of the variables. To rule out potential confounding background effects, we included gender as a covariate when testing the hypotheses.

Hypothesized model

As career exploration and goal persistence were parallel mediators and were correlated with one other (see Table 1), the error terms of the two mediators were specified to correlate in the hypothesized model. We conducted nested model comparisons between the indirect-path only model and a series of direct-path models (i.e., including possible direct paths from perceived family SES to career exploration, goal persistence, and person-job fit, and from scarcity to person-job fit). The direct-path model with a direct path from perceived family SES to career exploration showed an improved fit over the indirect-path only model, $\Delta\chi^2(1) = 4.72, p < .05$. As this direct-path model also had a good fit to the data, it was accepted as the final model: $\chi^2(83) = 141.46, p < .001$, CFI = .98, TLI = .97, RMSEA = .06 [.04, .07], SMRM = .04. In this model, the explained variance was 14% for scarcity, 10% for career exploration, 9% for goal persistence, and 33% for person-job fit.

Alternative model

To further validate the results, we tested an alternative model to the hypothesized model (Frazier et al., 2004). Previous studies suggested that when confronted with setbacks regarding career goals (e.g., negative feedback, unfavourable outcomes), young people were more likely to give up their current goals and/or reengage in other career paths (Hu et al., 2018; Wrosch et al., 2000). Our alternative model drew on these studies, and tested whether lower SES students were more likely to perceive poorer person-job fit as they perceived more scarcity, and, thus, were less likely to persist with their current goals and more likely to explore other career possibilities. The alternative model had acceptable fit indices: $\chi^2(84) = 148.04, p < .001$, CFI = .97, TLI = .97, RMSEA = .06 [.04, .07], SMRM = .06. However, in

comparison to the hypothesized model, it had lower CFI and SMRM, and a higher AIC, with $\Delta AIC = 4.58$ (AIC difference > 4 provides evidence of model superiority; Anderson et al., 1998). Thus, we proceeded with mediation analyses using the hypothesized model.

Mediation analyses

We found significant direct paths from perceived family SES to scarcity ($\beta = -.25, p = .003$) and career exploration ($\beta = .13, p = .03$), and from scarcity to career exploration ($\beta = -.26, p = .004$) and goal persistence ($\beta = -.30, p = .002$; See Figure 1). We then confirmed significant indirect effects of perceived family SES on career exploration (CI₉₅: .02, .13; indirect effect = .06; direct effect = .13) and goal persistence (CI₉₅: .02, .14; indirect effect = .07). Thus, hypothesis H1a and H1b were confirmed.

There were significant direct paths from career exploration and goal persistence to person-job fit ($\beta = .33$ and $.28$, respectively, $ps < .01$; see Figure 1); thus, Hypothesis H2a and H2b were supported. We then confirmed a significant total indirect effect of perceived family SES on person-job fit (indirect effect = .08). As expected, SES related to person-job fit through two three-staged paths (i.e., SES $\rightarrow$ scarcity $\rightarrow$ career exploration $\rightarrow$ person-job fit, CI₉₅: .002, .014; SES $\rightarrow$ scarcity $\rightarrow$ goal persistence $\rightarrow$ person-job fit, CI₉₅: .002, .014); thus, H3a and H3b were confirmed. Although not hypothesized, we found that perceived family SES also related to person-job fit through career exploration only (CI₉₅: .001, .024).

Again, as expected, we found significant indirect effect of perceived scarcity on person-job fit (indirect effect = $-.17$; CI₉₅: $-.28, -.07$). We further confirmed that scarcity related to person-job fit through both career exploration (CI₉₅: $-.09, -.01$) and goal persistence (CI₉₅: $-.10, -.01$), supporting H4a and H4b.

Discussion

Based on the life history perspective (Kaplan & Gangestad, 2005; Réale et al., 2010; Stearns, 1989), we examined a serial mediation model in which perceived family SES related

to person-job fit via resource scarcity and career behaviours (i.e., career exploration and job goal persistence). By and large, the results supported our hypotheses.

Family SES, perceived resource scarcity, and career behaviours

Our study contributes to previous literature on family SES and career development. We are the first to adopt the life history perspective to investigate how early life experiences (i.e., assessed as perceived childhood family SES) shape the way young people allocate their resources when seeking employment. First, we found that lower SES students were more likely to perceive higher resource scarcity in response to employment uncertainty; whereas higher SES students perceived less scarcity. This supports the previous proposition that young people might have different perceptions of uncertainty/threat, depending on their life histories (Del Giudice et al., 2016).

Second, our findings indicated that perceived resource scarcity related to young people's resource allocation decisions when investing effort and time in career activities. Those students who perceived more available time and job opportunities were likely to spend more time on activities that might maximize their future career success (e.g., obtaining a desired, suitable job that potentially increases opportunities for future advancement; Griskevicius et al., 2013). In contrast, students who perceived more resource scarcity were likely to invest less in these activities. This is understandable, as a thorough career exploration might be luxury for a person who has limited time for employment seeking, and compromising on goals is adaptive when goal opportunities seem unfavourable (Wrosch et al., 2000).

Previous studies regarding the relationships between SES and career exploration and goal persistence provided inconsistent findings, suggesting that SES might be related to these career behaviours under certain situations (Mittal & Griskevicius, 2014). Our findings echoed these studies; when faced with employment uncertainty, lower SES students were less likely to engage in career exploration activities, partially because they perceived more scarcity of

time and opportunities. We also noted that perceived family SES was only indirectly related to goal persistence through resource scarcity. This means that only when a sense of scarcity is induced will lower SES young people be more likely to compromise on their desired goals. This further supports the proposition that the diverging allocation decisions between lower and higher SES young people might only emerge in situations of uncertainty or threat (Del Giudice et al., 2016; Mittal & Griskevicius, 2014).

SES and career outcomes: The mediating roles of scarcity and career behaviours

Consistent with previous studies (e.g., Bernard et al., 2018; Werbel, 2000), we found that both career exploration and goal persistence were related to the positive career outcome of perceived person-job fit upon graduation. This suggests that these two behaviours are beneficial for obtaining a solid initial job match that potentially could lead to long-term career satisfaction and success (e.g., longer employment, more personal satisfaction, and better opportunities for advancement; Lindstrom et al., 2013).

In addition, we further contribute by finding that when faced with employment uncertainty/threat, a diverging pattern of perception and allocation decisions emerged, and, in turn, was associated with different outcomes. Higher SES students, who were likely to perceive having more resources and, thus, less threat in the situation, allocated more effort to career exploration and goal persistence, and, as a consequence, were more likely to perceive a good job match. In contrast, lower SES young people were more likely to report lower person-job fit, via perceiving greater resource scarcity and were more likelihood of focusing their attention and effort on more urgent and immediate needs (i.e., obtaining a job quickly). We found that perceived family SES was only indirectly related to person-job fit through scarcity and the two career behaviours of career exploration and goal persistence, and the two behaviours fully mediated between scarcity and person-job fit. These findings suggest that the life history theories (Del Giudice et al., 2016) have the potential to provide a useful

theoretical framework to explain the psychological processes that underlie the relationship between perceived family SES and career outcomes.

Practical implications

Our study suggests practical implications for career counsellors who work with university students. Previous studies indicated that meritocratic societal beliefs (i.e., beliefs that a person's career outcomes are determined by personal abilities and effort) are prevalent beliefs in China (Hu et al., 2020) and other countries (e.g., the USA; Shane & Heckhausen, 2013). However, our findings indicate that perceived family SES might still influence young people's employment outcomes through shaping their perception and allocation of resources. Career counsellors need to help young people understand how their context might influence their access to work, especially for lower SES students who hold very strong meritocratic beliefs, as this can alter the tendency of these students to blame themselves for unfavourable employment outcomes (Duffy et al., 2016).

Second, counsellors need to be alert to lower SES students' perceived resource scarcity when seeking employment. Our findings suggest that lower SES young people are likely to perceive scarce resources to cope with employment uncertainty, regardless of reality. This implicit sense of scarcity, in turn, might guide them to focus more on short-term employment outcomes, and, when encountering obstacles, compromise on desired jobs. Counsellors are encouraged to help these students evaluate whether their perceptions of resources are accurate, and, if so, identify strategies to compensate for this sense of scarcity. For example, they could start job seeking preparation earlier to allow sufficient time and develop personal capabilities to obtain more job opportunities (Kong & Jiang, 2011). These strategies can alter students' evaluations of resources, improve their personal control, and allow them to adjust their allocation decisions to achieve goals that might benefit them in the longer term.

Our results further suggest that perceived resource scarcity is related to unfavourable career outcomes upon graduation through insufficient career exploration and lower goal persistence. Thus, in addition to assisting students to improve resources, career counsellors are also encouraged to facilitate the processes of career exploration and goal striving. Some established career exploration interventions for university students might be useful here; for example, Peterson and Mar's (2004) goal-setting intervention has been demonstrated to improve goal clarity and goal persistence.

Limitations and future research

Our study has limitations that need to be addressed in future research. First, the findings might not be generalized to other university student populations. The sample in our study only included science and technology students from one university in China, with disproportionately more male than female students. Future studies should examine the relationships between perceived family SES and career outcomes that were found in this study in more diverse university student groups.

Second, we noted that in our study no direct effects were found from perceived family SES to goal persistence and person-job fit. As university education is a key mechanism for upward social mobility in China (and elsewhere), and graduates from university are more likely to obtain better jobs compared to those with lower educational attainment (Li et al., 2008), it is possible that the relationships between perceived family SES and career outcomes are stronger for young people with less education. For example, the job market might be more competitive for lower SES graduates from vocational colleges, and these young people might perceive more threat when seeking employment. Future research needs to test this possibility.

Third, when assessing scarcity of resources, we only included time and job opportunities. According to Cannon et al. (2019), except for quantifiable resources (e.g., opportunities,

time), other social (e.g., social support), cognitive (e.g., executive functioning), and psychological resources (e.g., personal skills) also contribute to a person's motivational processes. Capturing more aspects of scarcity will be useful to better understand how perceived scarcity links perceived family SES to career processes and outcomes.

In addition, we only collected data at one time point, just before graduation; thus, we were not able to confirm the directionality of the relationships between perceptions of childhood SES and career behaviours and outcomes. For example, we found that career exploration and goal persistence related to higher person-job fit. It is possible that students who obtained a well-suited job might attribute their success to more career exploration and goal persistence (i.e., when surveyed, tend to recall that they invested more in goal preparation and striving). Future research using longitudinal designs is required to test whether perceived family SES influences later career success via resource evaluation and career behaviours.

Last, we considered that, when facing employment uncertainty, young people from different backgrounds would make different trade-offs in accordance with their perceived resources. Although our results suggest that lower SES students invested less in career exploration and goal persistence, we were not able to identify which activities they prioritized. Based on life history theories, we speculated that these young people might invest more in direct job seeking activities (e.g., completing more job applications; Blau, 1994; Griskevicius et al., 2013), but these assumptions need to be examined in future research.

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Table 1

Descriptive Statistics, Zero-Order Correlations (Below Diagonal), and Correlations among Latent Variables (Above Diagonal); N = 224.

Variables	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7
1. SES	4.58	1.74	-						
2. Resource scarcity	2.63	0.88	-.22**	-					
3. Career exploration	3.59	0.69	.21**	-.30***	-				
4. Goal persistence	4.06	0.64	.10	-.30***	.54***	-			
5. Perceived job-person fit	3.95	0.70	.01	-.27***	.47***	.43***	-		
6. GPA	3.04	0.47	-.05	.02	.06	.06	.01	-	
7. Age	21.34	1.34	.02	-.01	-.02	.02	.01	-.01	-
8. Gender ^a	-	-	.07	.23***	.03	-.01	-.16*	.38***	.06

Note. SES = Socio-economic status; GPA = Grade-point average; ^a0 = *male*, 1 = *female*; * $p < .05$, ** $p < .01$, *** $p < .001$.

Figure 1. Standardised estimates for the hypothesized mediation model; only significant paths are reported. Coefficients before slash indicate total effects; coefficients after slash are direct effects in presence of the mediator; ^a 0 = male, 1 = female; * $p < .05$; ** $p < .01$; *** $p < .001$.