

## ARTICLE

# Sustaining newcomers' career adaptability: The roles of socialization tactics, job embeddedness and career variety

Di Cai<sup>1</sup> | Zehua Li<sup>2</sup> | Lingxiao Xu<sup>3</sup> | Lanyue Fan<sup>2</sup>  | Shanshan Wen<sup>4</sup> | Fangmin Li<sup>5</sup> | Ziqing Guan<sup>6</sup> | Yanjun Guan<sup>2</sup>

<sup>1</sup>School of Management, Shandong University, Jinan, China

<sup>2</sup>Durham University Business School, Durham, UK

<sup>3</sup>Leeds University Business School, Leeds, UK

<sup>4</sup>School of Management, Shenzhen University, Shenzhen, China

<sup>5</sup>School of Psychological and Cognitive Sciences, Peking University, Beijing, China

<sup>6</sup>School of Physics & Electronics Science, Shandong Normal University, Jinan, China

## Correspondence

Lanyue Fan, Durham University Business School, Durham, DH1 3LB, UK.

Email: lanyue.fan@durham.ac.uk

Shanshan Wen, School of Management, Shenzhen University, Shenzhen, China.

Email: sswen@szu.edu.cn

## Funding information

Natural Science Foundation of Shandong Province, Grant/Award Number: ZR202102240345; Humanities and Social Sciences Foundation of the Ministry of Education, China, Grant/Award Number: 21YJA630001

## Abstract

In this study, we aim to examine how socialization practices predict newcomers' career adaptability during their organizational transitions. Drawing on career construction theory and conservation of resources theory, we argue that newcomers' job embeddedness, as predicted by their perceived organizational socialization tactics, positively predicts their career adaptability during career transitions. We investigate the role of past transition experiences (i.e., career variety) in moderating the relationship between job embeddedness and career adaptability. Data were collected at three time points from 492 newcomers in an information technology company in China. The newcomers' perceived organizational socialization tactics (i.e., training, future prospects and coworker support) positively predicted their job embeddedness, which was positively associated with their career adaptability. Additionally, career variety weakened the positive effect of job embeddedness on career adaptability. Furthermore, career variety moderated the indirect effects of future prospects and coworker support on career adaptability via job embeddedness, but not that of training. We conclude the article with discussions of our theoretical and practical contributions.

## KEYWORDS

career adaptability, career construction theory, career variety, conservation of resources theory, job embeddedness, organizational socialization tactics

This is an open access article under the terms of the [Creative Commons Attribution-NonCommercial-NoDerivs](https://creativecommons.org/licenses/by-nc-nd/4.0/) License, which permits use and distribution in any medium, provided the original work is properly cited, the use is non-commercial and no modifications or adaptations are made.

© 2023 The Authors. *Journal of Occupational and Organizational Psychology* published by John Wiley & Sons Ltd on behalf of The British Psychological Society.

### Practitioner points

- Organizational entry as a demanding period will drain newcomers' self-regulation resources, but organizational socialization tactics can help newcomers to sustain their career adaptability by increasing their job embeddedness.
- Newcomers with fewer transition experiences benefit more from job embeddedness to develop their career adaptability.
- Organizations should provide well-designed organizational socialization tactics which benefit both organizations and newcomers.

## BACKGROUND

In a career world characterized by increasing job mobility and frequent career transitions, career adaptability, which refers to individuals' psychosocial resources to cope with developmental tasks, work traumas and occupational transitions (Savickas, 2005, 2013; Savickas & Porfeli, 2012), plays a critical role in facilitating individuals' adaptation in their career transitions (Savickas, 2005, 2013). It has been found consistently that during school-to-work or work-to-work transitions, career adaptability positively predicts self-efficacy (Guan et al., 2013, 2014; Matijaš & Seršić, 2021; Pajic et al., 2018), job search success and employment quality (Guan et al., 2013, 2014; Koen et al., 2012; Pan et al., 2018; Van der Horst et al., 2021), as well as subjective well-being (Ramos & Lopez, 2018). Career adaptability also serves as an important resource that weakens the negative impacts of radical career changes on adapting effectiveness (Rudolph & Zacher, 2021). Although studies have shown that career adaptability is predicted by personal factors, such as demographic characteristics (e.g., age and education), personality constructs (e.g., proactive personality, extraversion, and openness to experience), future temporal focus, core self-evaluations (Cai et al., 2015; Hirschi, 2009; Zacher, 2014), vocational identity (Negru-Subtirica et al., 2015) and emotional intelligence (Coetzee & Harry, 2014), it can also be shaped by contextual factors, such as parental career-specific behaviours (Guan et al., 2015, 2018; Liang et al., 2020), leadership styles (Delle & Searle, 2020), perceived social support (Guan et al., 2016; Hirschi, 2009; Ocampo et al., 2018; Tian & Fan, 2014) and the quality of the learning environment (Tian & Fan, 2014).

Despite the accumulated research on the positive effects of career adaptability and its antecedents, little is known about how career adaptability is influenced by organizational factors during transitions. This is problematic given that career adaptability is a changeable factor that develops through dynamic interactions between individuals and their environments across the life span (Savickas & Porfeli, 2012). As posited by career construction theory (Savickas, 2005, 2013), career development is an iterative process consisting of continuously adapting and of learning circles: while individuals rely on career adaptability to facilitate career transitions, their career adaptability is also influenced during the transitions. A few empirical studies have begun to examine this possibility by focusing on the accumulative effects of career transitions on career adaptability (Guan et al., 2016) and exploring undergraduate students' career adaptability development after internship participation or training (Koen et al., 2012; Ocampo et al., 2020). However, no systematic examination of how organizational socialization tactics may influence newcomers' career adaptability during career transitions has been conducted.

Based on career construction theory (Savickas, 1997, 2005, 2013) and conservation of resources (COR) theory (Hobfoll, 1989, 2001), we seek to fill this gap. From a COR perspective (Halbesleben et al., 2014; Hobfoll, 2001), the high levels of unfamiliarity and uncertainty during organizational entry may drain newcomers' self-regulation resources (Bauer et al., 2021; Ellis et al., 2015; Gilmore & Harding, 2022), and thereby have potentially negative impacts on newcomers' career adaptability. In such a demanding situation, organizational socialization tactics (i.e., training, future prospects and coworker support; Taormina, 1997) may serve as critical contextual factors that sustain newcomers' career

adaptability (Halbesleben et al., 2014; Hobfoll, 2001). We also propose that this effect can be explained by newcomers' job embeddedness (i.e., links, fit and sacrifice; see Mitchell et al., 2001), which indicates a state of abundant resources (Halbesleben & Wheeler, 2008; Harris et al., 2011; Wheeler et al., 2012). That is, when newcomers receive these socialization tactics, they are more likely to develop a high level of job embeddedness, which enriches their other psychosocial resources (i.e., career adaptability; Halbesleben et al., 2014; Hobfoll, 2001). In addition, we consider career variety as an important moderator that weakens the positive effect of job embeddedness on newcomers' career adaptability because, usually, individuals with a high career variety have developed multiple career-related resources, which may decrease the utility of job embeddedness for career adaptability. Moreover, the potential 'dark side' of job embeddedness may further inhibit them from utilizing resources provided by the organization to construct their careers. An integrative model representing the above ideas is illustrated in Figure 1.

Our research makes several contributions. First, this study adds new knowledge to the antecedents of career adaptability by focusing on the critical role of organizational socialization tactics in newcomers' career adaptability at Time 3 (i.e., 8 months after entry), with career adaptability at Time 1 (i.e., 2 months after entry) controlled. Second, this research extends the literature on organizational socialization, which has a strong focus on organizational and work-related outcomes. The findings of this study highlight the importance of organizational socialization tactics in influencing career-related outcomes, and help to bridge the organizational socialization and career management literatures. Third, the inclusion of job embeddedness as a mediator helps in understanding the mechanisms underlying organizational socialization and career adaptability. Although research has tended to consider job embeddedness as an indicator of organizational adaptation, our results suggest that it also serves as an important resource for newcomers' positive changes in their career adaptability. Fourth, by examining the boundary condition for the relationship between job embeddedness and career adaptability through the study of the moderating role of career variety, we highlight the importance of previous career experience in newcomers' adaptability.

## THEORY AND HYPOTHESES

Career construction theory suggests that individuals draw on self-regulation resources to cope with career transitions (Savickas, 1997, 2005, 2013), and career adaptability consists of individuals' psychosocial resources to (a) foresee and prepare for challenges that are likely to occur in the future (career concern),

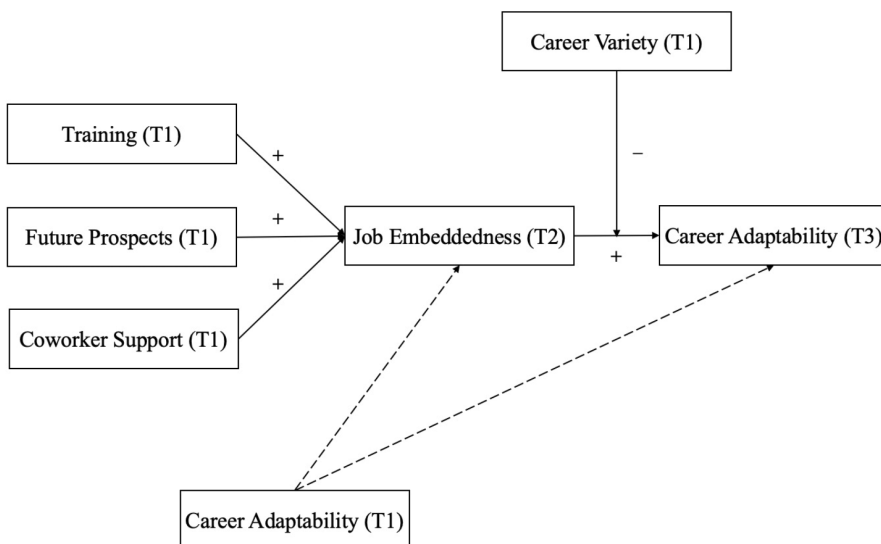


FIGURE 1 Hypothesized model

(b) engage in developmental activities and manage changes (career control), (c) explore potential career opportunities and identify situational changes (career curiosity) and (d) remain confident in adapting to environments (career confidence; Savickas, 2013; Savickas & Porfeli, 2012).

Career construction theory considers that an individual's career adaptability develops through their interactions with environments (Savickas & Porfeli, 2012). It focuses mainly on how individuals' personal resources (i.e., willingness or flexibility to make changes) facilitate career adaptability. However, it does not provide an explicit explanation for how career adaptability is acquired from environments (Ocampo et al., 2018), nor does it explain how individuals' previous career resources may influence the gaining of resources. As a result, we draw upon the COR perspective (Hobfoll, 1988, 1989, 2001), as it offers a systematic resource-based account of how career adaptability might be influenced during newcomers' organizational transitions.

The key tenet of COR theory is that individuals are motivated to conserve their current resources and acquire new resources (Hobfoll, 1988, 1989). In this context, resources refer broadly to things that people value, with an emphasis on objects, conditions, personal characteristics and energies (Hobfoll, 1989). Resources can help people respond to stress, conserve personal strengths and social bonds, achieve goals and satisfy needs, and fit into their current environment (Halbesleben et al., 2014; Hobfoll, 1989). As individuals gain resources, the resource-gain spiral corollary states that their ability to gain further resources improves (Halbesleben et al., 2014).

Based on a resource perspective, we argue that to cope with anxiety and uncertainty during organizational entry, newcomers are required to conserve and acquire valuable resources for better effective adaptation and career development (Halbesleben et al., 2014; Hobfoll et al., 2018; Savickas, 2005, 2013). The organizational socialization tactics (i.e., training, future prospects and coworker support) offer necessary resources that enable newcomers to become embedded in the new organization (Allen, 2006; Allen & Shanock, 2013; Halbesleben et al., 2014; Hobfoll et al., 2018) and the acquired resources (i.e., links, fit and sacrifice) further enrich newcomers' psychosocial resources (i.e., career adaptability; Halbesleben et al., 2014; Hobfoll, 2001). Moreover, the effects of resources acquired in the organization on career adaptability depend on newcomers' past career resources (Hobfoll, 2002; Hobfoll et al., 2018).

## Organizational socialization and job embeddedness

Organizational socialization tactics refer to the methods provided by organizations to assist newcomers in becoming involved in activities that help them acquire the necessary knowledge, attitudes and work behaviours (Allen, 2006; Taormina, 1997), which are valuable resources for newcomers to adapt to new environments (Halbesleben et al., 2014; Hobfoll, 1989, 2001; Savickas, 2013). Research on organizational socialization has commonly applied six tactics: collective (vs. individual), formal (vs. informal), sequential (vs. random), fixed (vs. variable), serial (vs. disjunctive) and investiture (vs. divestiture) tactics (Van Maanen & Schein, 1979). Based on this conceptualization of organizational socialization tactics, Jones (1986) subsequently grouped these six tactics into three broader factors: context, content and social aspects. Following Jones' (1986) framework, we focus on three socialization tactics provided by the organization: training, future prospects and coworker support. *Training*, a context socialization tactic that provides information to newcomers, is defined as the method that provides newcomers with the necessary functional knowledge, skills and ability to perform their roles. *Future prospects*, a content socialization tactic, provides both sequence arrangement and a likely plan for newcomers' work, and refers to the guidance for newcomers to foresee their career pathways in the organization. *Coworker support*, a social aspects socialization tactic that reflects newcomers' interactions with experienced organization members, is defined as supports (e.g., emotional, moral and instrumental) provided by other employees in the organization (Jones, 1986; Taormina, 1997; Van Maanen & Schein, 1979).

Job embeddedness is defined as a collection of material, social and psychological influences that retain employees (Mitchell et al., 2001; Yao et al., 2004; Zhang et al., 2012). It serves as an indicator of the match between an individual and the organization (Granovetter, 1995) and the state of mind in which a person decides to stay in an organization (Robinson et al., 2014). Job embeddedness consists of three

critical dimensions: links, fit and sacrifice. *Links* refer to the formal or informal connections that an individual develops with others or with their institutions; *fit* refers to an individual's perceived compatibility with their job (e.g., knowledge, skills and abilities) and their organization (e.g., values, goals and plans); and *sacrifice* refers to an individual's perceived loss of material or psychological benefits when leaving their current job (Mitchell et al., 2001). Through the lens of COR theory, researchers have generally treated job embeddedness as a state of access to abundant resources that an employee gains through investments of time, energy and effort (Halbesleben & Wheeler, 2008; Harris et al., 2011; Wheeler et al., 2012). For example, links represent person-to-person resources; fit describes employees' sense of match (e.g., knowledge, skills, abilities, goals and values) with the working environment; and sacrifice refers to any benefits that are likely to be forfeited when leaving the organization.

We argue that organizational socialization tactics (i.e., training, future prospects and coworker support) are positively associated with newcomers' job embeddedness. First, training provides ample opportunities for newcomers to build and foster links with other professional colleagues through related practices such as teamwork (Kiazad et al., 2015; Tian et al., 2016). It also boosts newcomers' fit with the organization by equipping them with the necessary knowledge and skills (Gardner et al., 2011; Ng & Feldman, 2007; Taormina, 1997). In addition, as training leads to the improvement of newcomers' human capital, we anticipate that the firm-specific knowledge and skills that newcomers learn from training programmes are perceived as benefits that may be sacrificed if they leave the job (Tian et al., 2016).

Second, the organizational socialization tactics about future prospects provide newcomers with the expectation of a rewarding career, stimulating them to be proactive in participating in career development activities (e.g., career networking) that enhance their links with others at work (Noe, 1996; Taber & Blankemeyer, 2015). Future prospects enable and encourage newcomers to invest in personal resources through proactive and foresightful behaviours (Hobfoll, 1989) to adapt their career goals and plans to their organization. This adaptation process fosters a strong sense of fit with their organization (Nguyen et al., 2017). Moreover, future prospects provide newcomers with developmental information, medium-term promotions, and long-term career development opportunities as conditions resources (Hobfoll, 1989), all of which are promising resources that newcomers are unwilling to sacrifice (Allen, 2006; Nguyen et al., 2017).

The third form of socialization—coworker support—tightens the bond between newcomers and coworkers, contributing to the social resources that enable newcomers to expand and enhance their social links with others (Bauer et al., 2007; Halbesleben et al., 2014; Yang & Wong, 2020). Coworker support also offers newcomers the opportunity to gain help and verbal suggestions from senior employees, which further facilitates the newcomers' fit with the organization (Cable & Parsons, 2001). At the same time, the established friendships in this organization generated by coworker support are important social resources that newcomers are reluctant to sacrifice (Allen, 2006). Therefore, we propose the following hypothesis:

**Hypothesis 1** *The three components of organizational socialization tactics, namely training (H1a), future prospects (H1b) and coworker support (H1c), are positively related to newcomers' perceived job embeddedness.*

## Job embeddedness and career adaptability

Career construction theory views career adaptability as psychosocial resources (Savickas, 2005, 2013). At the same time, COR theory posits that resources can generate other resources (Hobfoll, 2001; Hobfoll et al., 2018). In line with this perspective, we argue that job embeddedness provides newcomers with useful resources to leverage in developing career resources (i.e., career adaptability; Hobfoll, 2001; Hobfoll et al., 2018). First, the links dimension of job embeddedness denotes the formal and informal relationships that newcomers develop with members of their organization (Mitchell et al., 2001). These formal and informal connections offer them a better chance to access career-related resources from others (e.g., mentors, supervisors and senior colleagues), which boosts their career adaptability (Seibert et al., 2001). To be more specific, newcomers with deep links are more likely to receive vocational supports from others than newcomers without deep links, which could enable the newcomers to open

their minds in terms of the career opportunities that they could explore (career curiosity). For example, newcomers are more likely to engage in exploration activities in related professions and opportunities sponsored by their mentors or supervisors (Allen et al., 2004; Hall & Smith, 2009). With the benefit of the career experiences shared, and suggestions made, by senior members (Godshalk & Sosik, 2003; Hall & Smith, 2009), newcomers are more likely to establish long-term career goals and be aware of their vocation tasks and developmental needs in the distant future (career concern) than they would be without access to such shared experiences and suggestions. Moreover, the career guidance on expertize acquisition and skill learning gives newcomers the feeling that they can construct their career (career control), while the real-life career experiences from senior others may increase newcomers' efficacy in developing their careers due to the observational learning effect (career confidence; Bandura, 1977). Empirical evidence has found that supportive and influential resources derived from individuals' social networks contribute to their career adaptability (Sou et al., 2022).

Second, the fit dimension of job embeddedness denotes newcomers' accumulation of relevant knowledge, skills and abilities to meet their role requirements and the adaptation of their values, career goals and plans to the larger organizational culture (Mitchell et al., 2001). A clear understanding of career goals and their environment means that newcomers are more likely to develop a sense of what they need to learn in the future (career concern) and become more self-disciplined in developing relevant knowledge, skills and abilities to prepare for their career future (career control) than if they lack such an understanding (Bauer et al., 2007; Qi et al., 2014). In addition, the opportunities that allow newcomers to increase their human capital enable them to explore their career possibilities (career curiosity) more effectively than they would otherwise. Finally, the experience of finding a fit between self and the environment enhances newcomers' confidence in facing career transitions, thus contributing to their career confidence (Bandura, 1997; Bauer et al., 2007). Studies have provided preliminary support for the benefits of the fit dimension by showing that employees who develop more (vs. less) knowledge, skills and abilities in the organization have a higher (vs. lower) capacity to easily adapt to changes in the internal and external labour markets (De Vos et al., 2011) and are more (vs. less) likely to thrive in the ever-changing work environment (Eby et al., 2003).

Third, the perceived sacrifice indicates that newcomers have gained tangible or intangible benefits through proactively interacting with the environment, where tangible benefits refer to, for example, pay, advancement opportunities, financial bonuses and office materials, and intangible benefits refer to, for example, autonomy, self-esteem, job satisfaction, career satisfaction and reduced stress (Ampofo et al., 2017; Ashforth & Saks, 1996; Bauer et al., 2007; Mitchell et al., 2001). According to the resource-gain spiral, the material attained in transitions can help newcomers attain further career resources. For example, advancement opportunities offer newcomers 'raw materials' for thinking and preparing for their future. With these opportunities in mind, they are more likely than otherwise to be aware of the vocational choices that they should make and to prepare for their future careers (career concern). These opportunities also signal the directions for individuals to explore their possible selves in the environment. This can help newcomers develop abilities in gathering career-related information, thus contributing to career curiosity. In addition, the autonomy of pursuing personal goals (Mitchell et al., 2001) means that employees can make their own decisions and take responsibility for their actions, thus enhancing their ability to control their careers (career control). Furthermore, the subjective benefits gained from the environment convince them of their ability to cope with challenges and difficulties and give them a positive image of their career, which contributes to their confidence in constructing their career (career confidence). Thus, it is likely that the objective and subjective materials that newcomers attain during their transition serve as inputs for their career adaptability. Research has provided preliminary support by showing that those with higher (lower) advancement expectations are more (less) likely to gain resources from environments (Singh et al., 2009) and those with higher (lower) psychological benefits (i.e., subjective career success) are more (less) adaptable in their organization (Blokker et al., 2019).

The effects of job embeddedness are not universally positive. As Halbesleben et al. (2014) argued, the valence of resources may change as an individual grows in time and experience. For example, a high level of job embeddedness could mean an increased risk of becoming 'stuck' in a job because it reduces employees' motivations and opportunities to learn and develop career resources that are not firm-specific (Ng &

Feldman, 2010). However, as our research setting focuses on newcomers, who usually lack the resources (e.g., networks, knowledge, skills and ability) to construct their careers, it is reasonable to expect that, overall, the resources provided by the organization (i.e., links, fit and sacrifice) should be beneficial to them. Nevertheless, the effects are likely to vary between newcomers, and some newcomers may develop multiple resources and perceive the detrimental effect of job embeddedness. This issue is discussed in the next section.

Taking the results of the discussion together, we propose the following hypothesis:

**Hypothesis 2** *Newcomers' job embeddedness is positively related to career adaptability (H2a) and mediates the positive effects of training (H2b), future prospects (H2c) and coworker support (H2d) on career adaptability.*

## Career variety as a moderator

Following career construction theory and COR theory, we propose that an individual's accumulated transition experiences, as reflected in career variety (i.e., the diversity of the functional areas and institutional contexts experiences accumulated in an individual's career over time; see Karaevli & Hall, 2006), moderates the effect of job embeddedness on career adaptability. According to COR theory, accumulated resources enable individuals to acquire desirable resources, but the amount of resources already possessed by the individuals influences their acquisition of new resources (Hobfoll, 2002; Hobfoll et al., 2018). In line with this argument, we propose that while job embeddedness helps newcomers gain more resources (i.e., career adaptability) than before, the effect is influenced by the resources (i.e., career variety) that they already possess (Hobfoll, 2002; Hobfoll et al., 2018; Karaevli & Hall, 2006).

First, the utility of job embeddedness in influencing career adaptability differs among people with different career experiences (Hobfoll, 2002; Hobfoll et al., 2018). Newcomers with a high level of career variety have various experiences in different industries, organizations and departments (Karaevli & Hall, 2006). They have also established links and accumulated social resources outside the current organization (Dobrev & Merluzzi, 2018). These newcomers, having a deep understanding of their career and environment, also have established personal resources to cope with challenges during their transition (Beus et al., 2014; Beyer & Hannah, 2002; Dobrev & Merluzzi, 2018), and they are more marketable than individuals without such resources (Bian, 1997; Dobrev & Merluzzi, 2018; Granovetter, 1995). Thus, this dilutes the utility of resources provided by the current organization (i.e., job embeddedness) in developing career adaptability. In contrast, the infusion of resources (i.e., job embeddedness) for newcomers with few resources can have a powerful impact on their career adaptability (Hobfoll et al., 2018).

Second, the valence of a resource can be idiosyncratically valuable (Freund & Riediger, 2001). As we noted before, job embeddedness has potentially negative effects that increase individuals' chances of being stuck in the job (Ng & Feldman, 2010). This detrimental effect could be evident in sectors characterized as high mobility, including, for example, the information technology (IT) sector. The people who have more transition experiences are more likely to be aware of or even have experienced such adverse effects (Karaevli & Hall, 2006), which makes them less likely to rely on the job embeddedness in this organization to develop their career adaptability compared with those with fewer transition experiences.

Based on the above arguments, we propose that career variety mitigates the effect of job embeddedness on career adaptability.

**Hypothesis 3** *Career variety moderates the relation between job embeddedness and career adaptability, such that the effect of job embeddedness on career adaptability is weaker (stronger) among individuals with a higher (lower) level of career variety.*

In addition, given the mediation role of job embeddedness in the relation between three organizational socialization tactics and career adaptability, we further propose that the indirect effects of organizational socialization tactics on career adaptability through job embeddedness are moderated by career variety. Accordingly, we propose the following moderated mediation model:

**Hypothesis 4** *Career variety moderates the indirect effects of three organizational socialization tactics, namely training (H4a), future prospects (H4b) and coworker support (H4c), on career adaptability through job embeddedness, such that the mediated relationships are weaker (stronger) under a higher (lower) level of career variety.*

## METHOD

### Participants and procedures

We conducted this study by investigating newcomers in one of China's largest IT companies, which provided newcomers with intensive socialization tactics at the beginning of their organizational entry. All of the participants volunteered to join the survey and were informed that the data would only be used for research purposes. Data for this study were collected in three waves across 6 months to alleviate concerns regarding common method variance. The first wave (Time 1) was conducted 2 months after participants joined the company, and measured the independent variables (i.e., training, future prospects and coworker support), the moderator (i.e., career variety) and the control variables (i.e., gender, age, education, position and career adaptability). At Time 2 (4 months after entry), the participants provided ratings on their job embeddedness. At Time 3 (8 months after entry), the participants were asked to rate their career adaptability.

We recruited 757 participants at Time 1, and 621 of them provided valid information. At Times 2 and 3, valid responses were provided by 600 and 492 participants respectively. Thus, the final sample size was 492, representing an overall response rate of 65.0%. The sample consisted of 398 (80.9%) males and 94 (19.1%) females, with an average age of 25.81 years ( $SD = 2.02$ ). Of these participants, 326 (66.3%) held a bachelor's degree, 161 (32.7%) held a master's degree and five (1%) held a doctoral degree. In terms of position, the respondents worked in research and development (63.6%), technical support (8.3%), project implementation (13%) and other positions (15.1%).

### Measurement

Unless specifically mentioned, all items in English were translated into Chinese following standard translation and back-translation procedures (Brislin, 1980). Responses were collected on 5-point Likert scales ranging from *strongly disagree* (1) to *strongly agree* (5).

#### Training, future prospects and coworker support (Time 1)

We used the 12-item organizational socialization scale developed by Cable and Parsons (2001) to measure training (e.g., 'I have been through a set of training experiences that are specifically designed to give newcomers a thorough knowledge of job-related skills'), future prospects (e.g., 'The steps in the career ladder are clearly specified in this organization') and coworker support (e.g., 'Almost all of my colleagues have been supportive of me personally') at Time 1. Cronbach's alphas were .92, .91 and .79 for training, future prospects and coworker support respectively.

#### Career variety (Time 1)

Based on the research of Crossland et al. (2014), we asked the participants to report the number of industries and companies for which they had worked, and their positions (e.g., 'How many different companies have you worked for since you had your first full-time job?'). The Chinese version was used by Guan



et al. (2016). Cronbach's alpha was .91 and the mean score of these three items was used to represent the participants' career variety.

### Job embeddedness (Time 2)

We adopted the 7-item scale of Crossley et al. (2007) on overall job embeddedness (e.g., 'I feel attached to this organization'). Cronbach's alpha was .91.

### Career adaptability (Time 1 and Time 3)

We measured career adaptability at both Time 1 and Time 3 using the 12-item Career Adapt-Abilities Scale–Short Form (CAAS–SF) by Maggiori et al. (2017). Sample items included, 'Thinking about what my future will be like' and 'Working up to my ability'. Cronbach's alphas at Times 1 and 3 were .96 and .97 respectively.

### Control variables (Time 1)

We included age (in years), gender (0 = male, 1 = female), education (1 = bachelor's degree, 2 = master's degree and 3 = doctoral degree) and position in the organization (research and development position, technical support position and project implementation position: 0 = no, 1 = yes) as control variables, as research has suggested that these factors influence career adaptability (Schuesslbauer et al., 2018; Zacher, 2014). To explore the predictors of residual change of career adaptability during the transition (McArdle, 2009), we controlled for the baseline level of career adaptability at Time 1 following the literature (Hirschi, 2009; Zacher, 2014).

## RESULTS

### Confirmatory factor analyses

We conducted a series of confirmatory factor analyses (CFAs) using Mplus 8.3 to assess the measurement invariance of career adaptability, and the extent to which the scale items captured the intended constructs.

### Measurement invariance of career adaptability

Given that career adaptability was measured at two different time points, we examined the measurement invariance between Times 1 and 3 to ensure that measurement differences did not contaminate the observed relationships, which should originate from covariance in constructs (Golembiewski et al., 1976). As career adaptability has been constructed as a second-order construct with four subdimensions (Maggiori et al., 2017; Savickas, 2013; Savickas & Porfeli, 2012), we first examined the model fit of the second-order construct and then the measurement invariance.

Consistent with Spurk et al. (2020), we tested two competing CFA models of career adaptability: a one-factor model and a second-order factor model. The one-factor model, in which all items loaded on a single latent factor at each measurement occasion, provided a poor fit to the data, with  $\chi^2(df = 251) = 1689.88$ , a comparative fit index (CFI) of .88, a Tucker–Lewis index (TLI) of .87 and a root mean square error of approximation (RMSEA) of .11 (90% CI [.103, .113]). By contrast, the second-order

factor model provided an acceptable fit to the data (Spurk et al., 2020), such that  $\chi^2(df = 243) = 917.32$ , CFI = .95, TLI = .94 and RMSEA = .08 (90% CI [.070, .080]). Chi-square difference tests indicated that the second-order factor model had a better fit consistently across two time points than the one-factor model, with  $\Delta\chi^2_{T1} (\Delta df = 16) = 5430.88$ ,  $\Delta\chi^2_{T3} (\Delta df = 16) = 6245.07$  and  $p < .001$ .

Following the best-practice recommendations of Chen et al. (2005) for testing second-order construct invariance, we examined configural (i.e., the pattern of fixed and free factor loadings), metric (i.e., factor loadings), scalar (i.e., intercepts) and strict (i.e., residual variances) invariances. The results (see Table 1) show that the CAAS–SF measure of career adaptability demonstrated configural invariance (Model 1), metric invariance (Models 2 and 3) and partial scalar invariance (Model 4). Following the criteria suggested by Chen et al. (2005) and Chen (2007) that  $\Delta CFI < .01$  and  $\Delta RMSEA < .015$  indicate invariance, we found that the difference in the intercepts of the first-order factors (i.e., Model 4 vs. Model 5, CFI: .945 vs. .938 and RMSEA: .072 vs. .077), the disturbance of the first-order factors (i.e., Model 5 vs. Model 6, CFI: .938 vs. .937 and RMSEA: .077 vs. .077) and the residual variances of the measured variables (i.e., Model 6 vs. Model 7, CFI: .937 vs. .935 and RMSEA: .077 vs. .076) were not substantial. Therefore, we concluded that the measurement invariance of career adaptability was guaranteed.

TABLE 1 Measurement invariance of second-order factor model of career adaptability

Second-order model	Model fit indices						Model comparison		
	RMSEA	CFI	TLI	SRMR	$\chi^2$	<i>df</i>	$\Delta\chi^2$	$\Delta df$	<i>p</i>
Configural invariance (Model 1)	.075 [.070, .080]	.946	.938	.035	917.320	243			
Metric invariance I (Model 2)									
First-order factor loadings invariant	.074 [.069, .079]	.946	.940	.038	924.265	251	6.945	8	.542
Metric invariance II (Model 3)									
First- and second-order factor loadings invariant	.074 [.069, .079]	.945	.941	.045	931.896	254	7.631	3	.054
Scalar invariance I (Model 4)									
First- and second-order factor loadings and intercepts of measured variables invariant	.072 [.067, .077]	.945	.942	.046	938.871	262	6.975	8	.539
Scalar invariance II (Model 5)									
First- and second-order factor loadings, and intercepts of measured variables and first-order factors invariant	.077 [.072, .081]	.938	.936	.081	1032.451	266	93.580***	4	<.001
Strict invariance I (Model 6)									
First- and second-order factor loadings, intercepts and disturbances of first-order factors invariant	.077 [.072, .082]	.937	.936	.088	1049.184	270	16.733**	4	.002
Strict invariance II (Model 7)									
First- and second-order factor loadings, intercepts and disturbances of first-order factors, and residual variances of measured variables invariant	.076 [.072, .081]	.935	.936	.090	1090.343	282	41.159***	12	<.001

Note: *N* = 492. Unstandardized results are presented. \*\**p* < .01. \*\*\**p* < .001 (two-tailed tests).

Abbreviations: CFI, comparative fit index; RMSEA, root mean square error of approximation; SRMR, standardized root mean square residual; TLI, Tucker–Lewis index.

## Measurement of intended constructs

We conducted a series of CFAs to test whether scale items captured the intended constructs in the research model. The hypothesized 7-factor measurement model (i.e., single measures of training, future prospects, coworker support, job embeddedness and career variety as well as repeated measures of career adaptability) fitted the data well, as  $\chi^2(df = 968) = 2890.87$ ,  $\chi^2/df = 2.99$ ,  $p < .001$ , CFI = .91, TLI = .90, RMSEA = .06 and SRMR = .05. A test of alternative models showed that the hypothesized 7-factor model had a better fit than a 5-factor model that combined all three socialization approaches—training, future prospects and coworker support—measured at Time 1 into one factor,  $\Delta\chi^2 = 921.40$ ,  $\Delta df = 11$  and  $p < .001$ ; a 3-factor model that combined all of the factors measured at Time 1 into one factor,  $\Delta\chi^2 = 3827.39$ ,  $\Delta df = 18$  and  $p < .001$ ; and a 1-factor model that combined all of the factors,  $\Delta\chi^2 = 10,825.36$ ,  $\Delta df = 21$  and  $p < .001$ .

## Descriptive statistics and correlations

The means, standard deviations and correlations for all of the variables are shown in Table 2. All three organizational socialization tactics—training,  $r = .34$ ,  $p < .001$ , future prospects,  $r = .37$ ,  $p < .001$  and coworker support,  $r = .34$ ,  $p < .001$ —were positively related to job embeddedness. In turn, job embeddedness was positively related to career adaptability,  $r = .27$ ,  $p < .001$ . Following Li et al. (2014), we calculated the mean level and rank-order change of career adaptability. The mean level of career adaptability at Time 1 was significantly lower than that at Time 3, Cohen's  $d = .69$ ,  $t = 9.96$ ,  $p < .001$  and the rank-order change—typically indicated by correlations of the variable at different time points—was .37, suggesting career adaptability was not stable during the transition. However, the change in mean level and rank order did not prevent us from further studying the individual difference in change (Roberts et al., 2008; Roberts & Mroczek, 2008).

## Hypothesis tests

We conducted path modelling to test our hypotheses using Process v3.5. The results, based on 5000 bootstrap replicates (see Table 3), demonstrated that after controlling for the effects of the control variables, Time 1 training,  $\beta = .13$ ,  $p = .025$ , future prospects,  $\beta = .19$ ,  $p = .004$  and coworker support,  $\beta = .17$ ,  $p = .007$ , were positively related to job embeddedness. Thus, H1a, H1b and H1c were supported. Job embeddedness was found to be positively related to Time 3 career adaptability,  $\beta = .16$ ,  $p < .001$ , after controlling for Time 1 career adaptability, thus supporting H2a. The indirect effects of training (.02), future prospects (.03) and coworker support (.03) on Time 3 career adaptability via job embeddedness were significant, with bootstrapped 95% CIs of [.003, .043], [.007, .060] and [.006, .055] respectively. Thus, H2b, H2c and H2d were supported.

In terms of the moderation hypothesis, the results based on 5000 bootstrap replications (Table 4) show that after controlling for the effects of control variables, career variety moderated the effect of job embeddedness,  $\beta = -.07$ ,  $p = .047$ . The relationship between job embeddedness and career adaptability was significant when the level of career variety was low (1 *SD* below the mean),  $\beta = .22$ , 95% CI = [.122, .327], but it was not significant when the level of career variety was high (1 *SD* above the mean),  $\beta = .09$ , 95% CI = [.008, -.191]. These findings supported Hypothesis 3 (see Figure 2).

We then tested the moderated mediation hypotheses (Hypotheses 4a, 4b and 4c). With 5000 bootstrap replications, the results (see Table 5) show that after controlling for the effects of control variables, career variety moderated the indirect effects of future prospects and coworker support through job embeddedness. Specifically, the indirect effects of both independent variables were significant when the level of career variety was low but were not significant when the level of career variety was high. However, the moderated mediation effect of training was not significant, 95% CI = [-.0221, .0004]. Overall, the

TABLE 2 Descriptive statistics, reliabilities and intercorrelations

	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12
1. CA-T1	4.25	.58	<b>.96</b>											
2. TR-T1	4.02	.79	.49***	<b>.92</b>										
3. FP-T1	3.92	.77	.57***	.69***	<b>.91</b>									
4. CoS-T1	4.01	.69	.55***	.54***	.65***	<b>.79</b>								
5. JE-T2	3.30	.74	.21***	.34***	.37***	.34***	<b>.91</b>							
6. CA-T3	3.94	.65	.37***	.28***	.24***	.31***	.27***	<b>.97</b>						
7. Career Variety	1.06	.96	.07	.04	-.05	.02	.01	.09*	<b>.91</b>					
8. Age	25.81	2.02	.05	.13**	.11*	.08	.15**	.11*	.04	—				
9. Gender	.19	.39	-.11*	-.03	-.13**	-.06	.01	-.06	.22***	-.05	—			
10. Education	1.35	.50	.04	.11*	.09*	.08	.14**	.09	.04	.85***	.02	—		
11. Position 1	.64	.48	.04	.04	.08	.09	.12**	.13**	.04	.25***	-.33***	.22***	—	
12. Position 2	.08	.28	-.02	-.05	-.04	.01	-.10*	-.06	-.05	-.12**	.04	-.14**	-.40***	—
13. Position 3	.13	.34	.02	.01	.07	-.06	-.02	-.09	.01	-.22***	.09*	-.26***	-.51***	-.12**

Note: N = 492. \*p < .05. \*\*p < .01. \*\*\*p < .001 (two-tailed tests). Cronbach's alphas are reported in bold along the diagonal.

Abbreviations: CA, career adaptability; CoS, coworker support; FP, future prospects; JE, job embeddedness; Position 1, research and development position; Position 2, technical support position; Position 3, project implementation position; SD, standard deviation; T1, Time 1; T2, Time 2; T3, Time 3; TR, training.

TABLE 3 Results of path analysis for mediation model (bootstrap = 5000)

	Job embeddedness—Time 2			Career adaptability—Time 3		
	$\beta$ (SE)	<i>t</i>	<i>p</i>	$\beta$ (SE)	<i>t</i>	<i>p</i>
Constant	.94 (.66)	1.43	.153	1.28* (.57)	2.25	.025
Control variables						
Age	.02 (.03)	.75	.453	.02 (.03)	.62	.534
Gender	.14 (.09)	1.58	.114	-.04 (.07)	-.52	.605
Education	.03 (.12)	.28	.781	-.03 (.10)	-.33	.744
Position 1	.15 (.10)	1.47	.142	.12 (.09)	1.37	.171
Position 2	-.08 (.14)	-.60	.549	-.002 (.12)	-.01	.989
Position 3	.07 (.12)	.60	.548	-.04 (.11)	-.40	.687
Career Adaptability (CA)—Time 1	-.07 (.07)	-1.08	.279	.32*** (.06)	5.49	<.001
Predictors						
Training (TR)—Time 1	.13* (.06)	2.26	.025	.09 (.05)	1.80	.073
Future prospects (FP)—Time 1	.19** (.07)	2.86	.004	-.12* (.06)	-2.15	.032
Coworker support (CoS)—Time 1	.17** (.06)	2.72	.007	.11 (.05)	1.96	.051
Career variety	.01 (.03)	.29	.773	.06 (.03)	1.96	.051
Mediator						
Job embeddedness (JE)—Time 2				.16*** (.04)	3.94	<.001
<i>R</i> <sup>2</sup>	.18***			.21***		
<b>Bootstrap results for indirect effect</b>	<b>Estimate</b>	<b>SE</b>		<b>LL 95% CI</b>	<b>UL 95% CI</b>	
<i>TR</i> → <i>JE</i> → <i>CA</i>	.02	.01		.003	.043	
<i>FP</i> → <i>JE</i> → <i>CA</i>	.03	.01		.007	.060	
<i>CoS</i> → <i>JE</i> → <i>CA</i>	.03	.01		.006	.055	

Note: *N* = 492. Unstandardized coefficients are presented. \**p* < .05. \*\**p* < .01. \*\*\**p* < .001 (two-tailed tests).

Abbreviations: CI, confidence interval; LL, lower limit; Position 1, research and development position; Position 2, technical support position; Position 3, project implementation position; SE, standard error; UL, upper limit.

moderated mediation effects proposed in Hypotheses 4b and 4c were supported, whereas the effect proposed in H4a was not supported.

## DISCUSSION

In this study, we drew upon career construction theory and COR theory to examine how and when organizational socialization tactics influence newcomer career adaptability. Although the mean level of career adaptability at Time 3 was lower than that at Time 1, newcomers' perceived organizational socialization tactics were positively related to their job embeddedness, which in turn positively predicted their career adaptability. In addition, the positive effect of job embeddedness on career adaptability was significant among those who had a lower level of career variety. Furthermore, career variety moderated the indirect effects of future prospects and coworker support on career adaptability, but did not influence the indirect relationship between training and career adaptability. The theoretical and practical implications of these findings are discussed below.

First, career adaptability was lowered during organizational entry, which suggests that career adaptability is a malleable construct (Negru-Subtirica et al., 2015; Ocampo et al., 2020) and that organizational entry is a demanding period (Ellis et al., 2015; Gilmore & Harding, 2022). This is consistent with other research findings and arguments in the literature. These findings offer important evidence for the dynamic

TABLE 4 Results of path analysis for moderated mediation model (bootstrap = 5000)

	Job embeddedness—Time 2			Career adaptability—Time 3		
	$\beta$ (SE)	<i>t</i>	<i>p</i>	$\beta$ (SE)	<i>t</i>	<i>p</i>
Constant	-2.36*** (.66)	-3.60	<.001	1.78** (.58)	3.08	.002
Control variables						
Age	.02 (.03)	.78	.435	.02 (.03)	.72	.471
Gender	.14 (.09)	1.63	.105	-.05 (.07)	-.65	.514
Education	.03 (.12)	.26	.792	-.04 (.10)	-.42	.676
Position 1	.14 (.10)	1.46	.146	.13 (.09)	1.47	.143
Position 2	-.09 (.14)	-.68	.495	.02 (.12)	.14	.893
Position 3	.07 (.12)	.56	.578	-.04 (.11)	-.35	.727
Career Adaptability (CA)—Time 1	-.07 (.07)	-1.06	.290	.33*** (.06)	5.67	<.001
Predictors						
Training (TR)—Time 1	.13* (.06)	2.27	.024	.09 (.05)	1.78	.076
Future prospects (FP)—Time 1	.19** (.07)	2.85	.005	-.12* (.06)	-2.19	.029
Coworker support (CoS)—Time 1	.17** (.06)	2.73	.007	.10 (.05)	1.91	.057
Career variety (C_var)				.06 (.03)	1.90	.059
Interaction term						
JE $\times$ C_var				-.07* (.03)	-1.99	.047
Mediator						
Job embeddedness (JE)—Time 2				.16*** (.04)	4.02	<.001
R <sup>2</sup>	.18***			.22***		

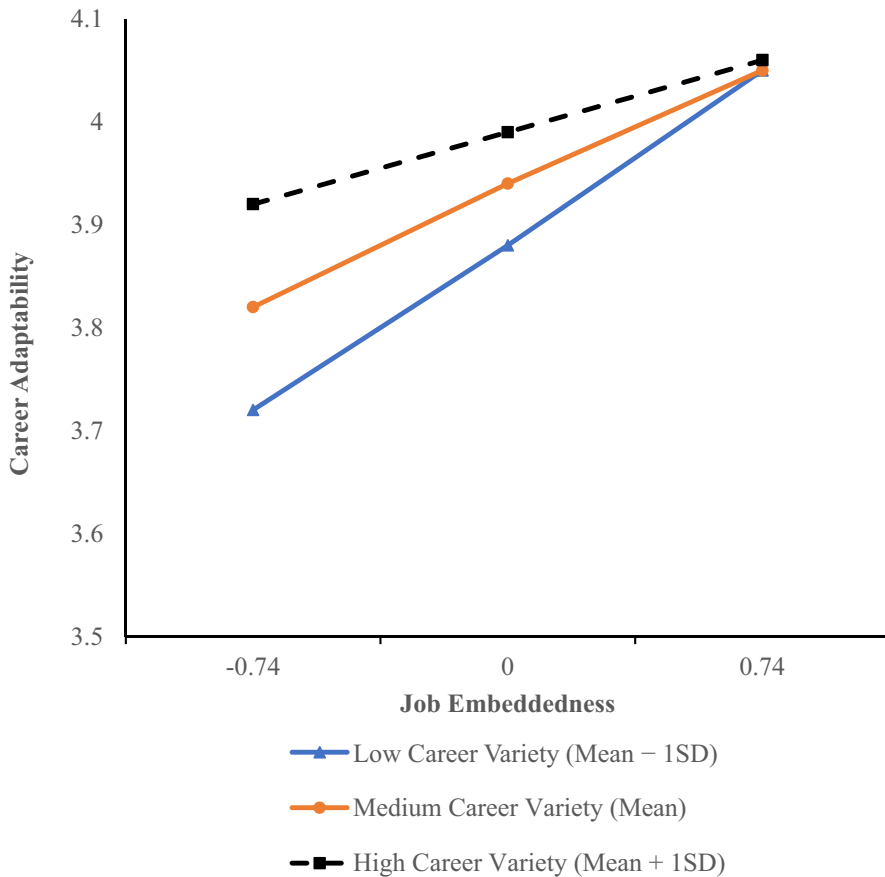
Note: *N* = 492. Unstandardized coefficients are presented. \**p* < .05. \*\**p* < .01. \*\*\**p* < .001 (two-tailed tests).

Abbreviations: Position 1, research and development position; Position 2, technical support position; Position 3, project implementation position; SE, standard error.

nature of career adaptability (Savickas, 2013). Moreover, we reveal that organizational socialization tactics might sustain career adaptability, or prevent it from decreasing through job embeddedness. This indicates the co-existence of resource consumption and resource gain during a career transition. Moreover, the fact that career adaptability at Time 3 was lower than that at Time 1 offers initial support to the corollary of COR theory, which states that resource gain tends to be weak and develop slowly, and is usually slower than resource loss (Hobfoll et al., 2018). We expect future longitudinal research to take these results a step further by directly analysing the changes in career adaptability during career transitions.

Second, the positive effects of organizational socialization over career adaptability extend the literature on career construction theory. Career adaptability is viewed as a set of accumulated resources gained through social experience and relative intervention (Cheung & Jin, 2016). Recent studies have revealed the effectiveness of contextual factors, such as parental behaviour (Guan et al., 2015, 2018; Liang et al., 2020), leadership styles (Delle & Searle, 2020) and organizational support (Guan et al., 2016; Ocampo et al., 2018), in developing employees' career adaptability. In this study, organizational socialization tactics positively predicted newcomers' career adaptability through job embeddedness, further extending the existing career adaptability literature. Given that our focus was on tactics (i.e., training, future prospects and coworker support) during organizational entry, future research could add to the field by investigating the longer term effects of these tactics and alternative organizational factors, such as the quality of leader–member exchange, leadership, management styles, human resource management practices, task characteristics (Ghosh & Gurunathan, 2015) and workplace culture (Schein, 2004).

In addition, by involving newcomers' career adaptability as the outcome variable, we bridge career development research and organizational behaviour studies. In particular, we contribute to the socialization literature by incorporating career-related outcomes (i.e., career adaptability). Our results are consist-



**FIGURE 2** Moderating effect of career variety on the relationship between job embeddedness and career adaptability. Note:  $N = 492$ .  $SD$ , standard deviation. The relationship between job embeddedness and career adaptability was insignificant when career variety was high (Mean +  $1SD$ ).

ent with findings that organizational socialization benefits the organization (e.g., through retention, organizational commitment, organizational identification and organizational citizenship behaviour) and newcomers' work (e.g., job performance, job satisfaction and turnover intention; see Bauer et al., 2007; Saks & Ashforth, 1997; Saks et al., 2007). We add to the literature because our results indicate that socialization not only benefits the organization but also benefits individuals' career development. This aligns with the argument that organizational socialization tactics are beneficial for newcomers' careers (Fang et al., 2011). Future research could involve more distal career-related outcomes (e.g., career commitment or career satisfaction) to enrich the understanding of career-related outcomes (Chan & Mai, 2015; Savickas & Porfeli, 2012).

An intriguing result of our study is that future prospects had a negative effect on newcomers' career adaptability (coefficient =  $-0.12^*$ ), while its indirect effect through job embeddedness was positive. This result contrasts with the literature, which has suggested that the prospects of one's career future contribute to career adaptability (Kidd et al., 2003; Praskova & Johnston, 2021). It is possible that after controlling for the mediating effect of job embeddedness, other mechanisms exist that lead to these negative effects. For example, future prospects may create a gap between newcomers' current and ideal states during organizational entry. Newcomers who drained their psychological resources during organizational entry tend to be sensitive to the gap, either low or high, created by future prospects. When newcomers perceive that future prospects create a large gap between their current and ideal state, they may find that

TABLE 5 Conditional indirect effects based on 5000 bootstrap replications

	Career adaptability	
	Estimate	95% CI
Training		
Indirect effect	.02* (.01)	[.003, .043]
Moderated mediation effect	-.01 (.01)	[-.0221, .0004]
Low career variety (Mean - 1SD)	.03* (.01)	[.005, .059]
Mean	.02* (.01)	[.003, .043]
High career variety (Mean + 1SD)	.01 (.01)	[-.002, .033]
Future perspective		
Indirect effect	.03* (.01)	[.007, .060]
Moderated mediation effect	-.01* (.01)	[-.0310, -.0001]
Low career variety (Mean - 1SD)	.04* (.02)	[.012, .082]
Mean	.03* (.01)	[.008, .060]
High career variety (Mean + 1SD)	.01 (.01)	[-.003, .047]
Coworker support		
Indirect effect	.03* (.01)	[.006, .055]
Moderated mediation effect	-.01* (.01)	[-.0322, -.0001]
Low career variety (Mean - 1SD)	.04* (.02)	[.009, .079]
Mean	.03* (.01)	[.006, .057]
High career variety (Mean + 1SD)	.02 (.01)	[-.003, .041]

Note:  $N = 492$ . Unstandardized coefficients are presented. \*Indirect effect was significant if the confidence interval did not contain zero.

Abbreviations: CI, confidence interval; SD, standard deviation.

their future work selves are hard to imagine and achieve (Strauss et al., 2012). Therefore, we encourage future research to further explore these potentially negative and mixed effects of future prospects.

Third, our results show that job embeddedness fully mediated the effects of organizational socialization tactics on newcomers' career adaptability. Based on COR theory, we find that while career transition is a stage of resource consumption, where newcomers' career adaptability is drained, organizational socialization tactics supplement newcomers' career adaptability through job embeddedness. In other words, organizational socialization tactics serve as a source of resources (i.e., job embeddedness) for newcomers. Moreover, job embeddedness itself is a resource that newcomers can leverage to sustain their career adaptability. This finding is consistent with the arguments and findings of studies that have suggested that job embeddedness is a valuable resource (Halbesleben & Wheeler, 2008; Harris et al., 2011; Wheeler et al., 2012).

Our results add to knowledge on the effects of job embeddedness, which has sometimes been considered as detrimental to an individual's career (Ng & Feldman, 2010). The overall positive effect found in our study suggests that newcomers, who usually lack the resources to construct their careers, tend to rely on resources provided by the organization (i.e., links, fit and sacrifice) to develop their careers. Moreover, we considered newcomers' individual differences by incorporating career variety as a moderator, which elucidates the complicated effects of job embeddedness on a newcomer's adaptation and career management. Building on findings that employees' efforts in further self-development decrease as job embeddedness increases (Ng & Feldman, 2010), future research could adopt a longitudinal design to explore whether and when the positive effect for newcomers may disappear or become negative.

Fourth, we reveal a novel interaction between job embeddedness and career variety in predicting career adaptability, answering calls to explore how the interaction of different factors may facilitate or inhibit the development of career adaptability (Johnston, 2018). Prior work has revealed the main effect of career variety on career adaptability (Guan et al., 2016), and we provide new evidence that career



variety serves as an important moderator that mitigates the positive effect of job embeddedness on career adaptability. Based on COR theory, experienced newcomers may benefit less than less experienced newcomers from embedding themselves into their current organization to enhance their career adaptability because the utility and valence (i.e., the negatives vs. the positives) of the resources (i.e., job embeddedness) vary between newcomers with different career experiences (Hobfoll, 2002; Hobfoll et al., 2018). Newcomers with a higher (lower) level of career variety have greater (less) alternative job opportunities (Bian, 1997; Dobrev & Merluzzi, 2018; Granovetter, 1995), have accumulated more (less) resources outside the current organization (Beus et al., 2014; Beyer & Hannah, 2002; Dobrev & Merluzzi, 2018) and are more (less) likely to be aware of the negative effects of job embeddedness (Ng & Feldman, 2010). This decreases (increases) the need of the experienced (less experienced) newcomers to depend on the resources obtained in the current organization (i.e., job embeddedness) to acquire new resources (i.e., career adaptability). In summary, the results suggest that conceptualizing career variety as a moderator of newcomers' socialization process advances our understanding of career adaptability development. Future research could explore the role of other individual factors, such as learning goal orientation (VandeWalle & Cummings, 1997) and protean career orientation (Briscoe et al., 2006), as moderators.

The results of this study also show that individuals' career variety moderates the indirect effects of future prospects and coworker support on career adaptability via job embeddedness, but it does not have an impact on the indirect relationship between training and career adaptability. These findings indicate that the degree of influence of career variety can differ depending on the types of organizational socialization tactics. It is possible that although future prospects and coworker support can be replaced by newcomers' career prospects and social networks gained from experience, company-specific training is unlikely to be replaced by previous experience, and it remains important for both inexperienced and experienced newcomers during the transition process. We focused on the quantitative aspects of career variety, namely the number of industries, companies and positions, and did not consider the qualitative aspects of career variety, such as involuntary versus voluntary transitions (Guan et al., 2019), or the characteristics of individuals' jobs, such as autonomy, complexity, significance and feedback (Hackman & Oldham, 1975). It would be interesting to examine how these complicated aspects of career variety affect career adaptability development.

## Practical implications

Our findings provide several practical implications. First, given that organizational entry is a resource-exhausting period, we suggest that organizations pay attention to and take care of their newcomers by offering them the required and valuable resources during this stage, such as mentoring and proper leadership behaviours at work. This helps address and compensate for newcomers' resource losses when coping with anxiety and uncertainty during organizational entry.

Second, we show that career adaptability, as a malleable construct, can be developed by organizational socialization tactics through job embeddedness. Therefore, to ensure that the socialization intervention is perceivable to newcomers and to increase their involvement with it, we recommend that organizations value and invest in well-designed organizational socialization tactics. Especially when providing future prospects, organizations should involve newcomers in effective career discussions to establish reasonable and practical goals for them to pursue. These interventions could benefit both organizations and employees.

We also suggest that organizations, especially those within sectors characterized by abundant mobility opportunities and high turnover rates, such as the IT sector, include retention strategies when designing socialization practices to maximize the benefits of their organizational socialization tactics. This would effectively foster resource acquisition by newcomers and facilitate their adaptation to the new environment. Furthermore, it would help retain these well-adapted newcomers in the organization and could therefore help reduce or even eliminate potential 'sunk costs' caused by turnover.

Furthermore, considering the moderating role of career variety, organizations should provide socialization tactics for newcomers that are tailored to their differing career experiences. Inexperienced newcomers should take advantage of the opportunities provided by the organization to accumulate resources and enhance their career adaptability at the early stage of their career, whereas experienced newcomers should avoid overreliance on their previous experience and consciously take advantage of organizational opportunities to develop their career adaptability further.

## Limitations and future research directions

Despite the useful implications of this study, some limitations must also be acknowledged. First, although we provided evidence of the mediation effects of job embeddedness and the 3-wave design adopted helped to eliminate potential reverse causality, we were not able to establish causality. For example, it is possible that newcomers with higher (lower) job embeddedness are more (less) likely to perceive organizational socialization tactics rather than the reverse relationship. It is also possible that an increase in career adaptability leads to high job embeddedness, given that employees with higher (lower) career adaptability are less (more) likely to leave their organizations (Zhu et al., 2019). Consequently, longitudinal research is required to address this limitation. In addition, although the time-lagged design helped to mitigate common method bias (Podsakoff et al., 2003), we collected self-reported data from a single source (i.e., newcomers). Therefore, we encourage future researchers to address this limitation by incorporating information from different sources, such as supervisors and company owners.

Second, we call for future research to test the generalizability of our findings, given that we utilized data collected from a single company established within a particular cultural background (i.e., China). Although conducting this study in a single organization helped to control the effects of organizational practices varying between organizations, it might have limited the generalizability of our findings. Future research is needed to test our model in different companies to examine whether our findings are replicable. Moreover, we conducted this study in the Chinese context and cultural characteristics could have influenced our findings. Given that China is characterized by high levels of collectivism, which is characterized by concerns with adherence to a group (Hofstede, 2001), the effects of socialization practices and job embeddedness may be more prominent in such a culture than in non-collectivist cultures. Future research could consider such differences when generalizing our findings to other countries.

Third, although our study included several individual factors (e.g., age, gender, education and position) as control variables when examining the proposed model, future studies that aim to explore the unique effect of contextual factors on career adaptability development should control individual factors, such as personality constructs (e.g., extraversion, neuroticism, openness to experience and proactive personality), positive emotional disposition, core self-evaluations and future temporal focus, which have been identified as important predictors of career adaptability (Cai et al., 2015; Hirschi, 2009; Tolentino et al., 2014; Zacher, 2014). Furthermore, given that career adaptability develops through dynamic interactions between individuals and their environments over time (Savickas & Porfeli, 2012), it would be more interesting to test how contextual factors and individual factors interactively predict career adaptability change (Ocampo et al., 2020).

## CONCLUSION

By introducing the COR perspective, we provide novel insights into career construction theory by revealing that during the stressful organizational entry period, newcomers can benefit from organizational social tactics that supplement their career adaptability via job embeddedness. We show that these effects depend on the newcomers' previous career experiences, and hope that this finding will stimulate new directions for future research.

## AUTHOR CONTRIBUTIONS

**Di Cai:** Funding acquisition; investigation; resources; supervision; writing – original draft; writing – review and editing. **Zehua Li:** Formal analysis; methodology; project administration; validation; visualization; writing – original draft; writing – review and editing. **Lingxiao Xu:** Methodology; project administration; writing – original draft; writing – review and editing. **Lanyue Fan:** Methodology; validation; writing – original draft; writing – review and editing. **Shanshan Wen:** Supervision; writing – review and editing. **Fangmin Li:** Project administration; writing – review and editing. **Ziqing Guan:** Project administration; writing – review and editing. **Yanjun Guan:** Conceptualization; data curation; supervision; writing – review and editing.

## ACKNOWLEDGEMENTS

This research was supported by the Natural Science Foundation of Shandong Province [grant number: ZR202102240345] and the Humanities and Social Sciences Foundation of the Ministry of Education, China [grant number: 21YJA630001].

## CONFLICT OF INTEREST

All authors declare no conflict of interest

## DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

## ORCID

Lanyue Fan  <https://orcid.org/0000-0001-5203-8666>

## REFERENCES

- Allen, D. (2006). Do organizational socialization tactics influence newcomer embeddedness and turnover? *Journal of Management*, 32(2), 237–256. <https://doi.org/10.1177/0149206305280103>
- Allen, D. G., & Shanock, L. R. (2013). Perceived organizational support and embeddedness as key mechanisms connecting socialization tactics to commitment and turnover among new employees. *Journal of Organizational Behavior*, 34(3), 350–369. <https://doi.org/10.1002/job.1805>
- Allen, T., Eby, L., Potet, M., Lentz, E., & Lima, L. (2004). Career benefits associated with mentoring for proteges: A meta-analysis. *Journal of Applied Psychology*, 89(1), 127–136. <https://doi.org/10.1037/0021-9010.89.1.127>
- Ampofo, E. T., Coetzer, A., & Poisat, P. (2017). Relationships between job embeddedness and employees' life satisfaction. *Employee Relations*, 39(7), 951–966. <https://doi.org/10.1108/ER-10-2016-0199>
- Ashforth, B. K., & Saks, A. M. (1996). Socialization tactics: Longitudinal effects on newcomer adjustment. *Academy of Management Journal*, 39(1), 149–178. <https://doi.org/10.2307/256634>
- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, 84(2), 191–215. <https://doi.org/10.1037/0033-295x.84.2.191>
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. W. H. Freeman.
- Bauer, T. N., Bodner, T., Erdogan, B., Truxillo, D. M., & Tucker, J. S. (2007). Newcomer adjustment during organizational socialization: A meta-analytic review of antecedents, outcomes, and methods. *Journal of Applied Psychology*, 92(3), 707–721. <https://doi.org/10.1037/0021-9010.92.3.707>
- Bauer, T. N., Erdogan, B., Caughlin, D., Ellis, A. M., & Kurkoski, J. (2021). Jump-starting the socialization experience: The longitudinal role of day 1 newcomer resources on adjustment. *Journal of Management*, 47(8), 2226–2261. <https://doi.org/10.1177/0149206320962835>
- Beus, J., Jarrett, S., Taylor, A., & Wiese, C. (2014). Adjusting to new work teams: Testing work experience as a multidimensional resource for newcomers. *Journal of Organizational Behavior*, 35(4), 489–506. <https://doi.org/10.1002/job.1903>
- Beyer, J., & Hannah, D. (2002). Building on the past: Enacting established personal identities in a new work setting. *Organization Science*, 13(6), 636–652. <https://doi.org/10.1287/orsc.13.6.636.495>
- Bian, Y. (1997). Bringing strong ties back in: Indirect ties, network bridges, and job searches in China. *American Sociological Review*, 62(3), 366–385. <https://doi.org/10.2307/2657311>

- Blokker, R., Akkermans, J., Tims, M., Jansen, P., & Khapova, S. (2019). Building a sustainable start: The role of career competencies, career success, and career shocks in young professionals' employability. *Journal of Vocational Behavior, 112*, 172–184. <https://doi.org/10.1016/j.jvb.2019.02.013>
- Briscoe, J. P., Hall, D. T., & DeMuth, R. L. F. (2006). Protean and boundaryless careers: An empirical exploration. *Journal of Vocational Behavior, 69*(1), 30–47. <https://doi.org/10.1016/j.jvb.2005.09.003>
- Brislin, R. W. (1980). Translation and content analysis of oral and written material. In H. C. Triandis & J. W. Berry (Eds.), *Handbook of cross-cultural psychology* (Vol. 2, pp. 389–444). Allyn Bacon.
- Cable, D. M., & Parsons, C. K. (2001). Socialization tactics and person–organization fit. *Personnel Psychology, 54*(1), 1–23. <https://doi.org/10.1111/j.1744-6570.2001.tb00083.x>
- Cai, Z., Guan, Y., Li, H., Shi, W., Guo, K., Liu, Y., Li, Q., Han, X., Jiang, P., Fang, Z., & Hua, H. (2015). Self-esteem and proactive personality as predictors of future work self and career adaptability: An examination of mediating and moderating processes. *Journal of Vocational Behavior, 86*, 86–94. <https://doi.org/10.1016/j.jvb.2014.10.004>
- Chan, S. H. J., & Mai, X. (2015). The relation of career adaptability to satisfaction and turnover intentions. *Journal of Vocational Behavior, 89*, 130–139. <https://doi.org/10.1016/j.jvb.2015.05.005>
- Chen, F. F. (2007). Sensitivity of goodness of fit indexes to lack of measurement invariance. *Structural Equation Modeling: A Multidisciplinary Journal, 14*(3), 464–504. <https://doi.org/10.1080/10705510701301834>
- Chen, F. F., Sousa, K. H., & West, S. G. (2005). Teacher's corner: Testing measurement invariance of second-order factor models. *Structural Equation Modeling: A Multidisciplinary Journal, 12*(3), 471–492. [https://doi.org/10.1207/s15328007sem1203\\_7](https://doi.org/10.1207/s15328007sem1203_7)
- Cheung, R., & Jin, Q. (2016). Impact of a career exploration course on career decision making, adaptability, and relational support in Hong Kong. *Journal of Career Assessment, 24*(3), 481–496. <https://doi.org/10.1177/1069072715599390>
- Coetzee, M., & Harry, N. (2014). Emotional intelligence as a predictor of employees' career adaptability. *Journal of Vocational Behavior, 84*(1), 90–97. <https://doi.org/10.1016/j.jvb.2013.09.001>
- Crossland, C., Zyung, J., Hiller, N. J., & Hambrick, D. C. (2014). CEO career variety: Effects on firm-level strategic and social novelty. *Academy of Management Journal, 57*(3), 652–674. <https://doi.org/10.5465/amj.2012.0469>
- Crossley, C. D., Bennett, R. J., Jex, S. M., & Burnfield, J. L. (2007). Development of a global measure of job embeddedness and integration into a traditional model of voluntary turnover. *Journal of Applied Psychology, 92*(4), 1031–1042. <https://doi.org/10.1037/0021-9010.92.4.1031>
- De Vos, A., De Hauw, S., & Van der Heijden, B. I. J. M. (2011). Competency development and career success: The mediating role of employability. *Journal of Vocational Behavior, 79*(2), 438–447. <https://doi.org/10.1016/j.jvb.2011.05.010>
- Delle, E., & Searle, B. (2020). Career adaptability: The role of developmental leadership and career optimism. *Journal of Career Development, 49*(2), 269–281. <https://doi.org/10.1177/0894845320930286>
- Dobrev, S., & Merluzzi, J. (2018). Stayers versus movers: Social capital and early career imprinting among young professionals. *Journal of Organizational Behavior, 39*(1), 67–81. <https://doi.org/10.1002/job.2210>
- Eby, L. T., Butts, M., & Lockwood, A. (2003). Predictors of success in the era of the boundaryless career. *Journal of Organizational Behavior, 24*(6), 689–708. <https://doi.org/10.1002/job.214>
- Ellis, A. M., Bauer, T. N., Mansfield, L. R., Erdogan, B., Truxillo, D. M., & Simon, L. S. (2015). Navigating uncharted waters: Newcomer socialization through the lens of stress theory. *Journal of Management, 41*(1), 203–235. <https://doi.org/10.1177/0149206314557525>
- Fang, R., Duffy, M. K., & Shaw, J. D. (2011). The organizational socialization process: Review and development of a social capital model. *Journal of Management, 37*(1), 127–152. <https://doi.org/10.1177/0149206310384630>
- Freund, A. M., & Riediger, M. (2001). What I have and what I do: The role of resource loss and gain throughout life. *Applied Psychology: An International Review, 50*(3), 370–380. <https://doi.org/10.1111/1464-0597.00063>
- Gardner, T., Wright, P., & Moynihan, L. (2011). The impact of motivation, empowerment, and skill-enhancing practices on aggregate voluntary turnover: The mediating effect of collective affective commitment. *Personnel Psychology, 64*(2), 315–350. <https://doi.org/10.1111/j.1744-6570.2011.01212.x>
- Ghosh, D., & Gurunathan, L. (2015). Job embeddedness: A ten-year literature review and proposed guidelines. *Global Business Review, 16*(5), 856–866. <https://doi.org/10.1177/0972150915591652>
- Gilmore, S., & Harding, N. (2022). Organizational socialization as kin-work: A psychoanalytic model of settling into a new job. *Human Relations, 75*(3), 583–605. <https://doi.org/10.1177/0018726720964255>
- Godshalk, V. M., & Sosik, J. J. (2003). Aiming for career success: The role of learning goal orientation in mentoring relationships. *Journal of Vocational Behavior, 63*(3), 417–437. [https://doi.org/10.1016/S0001-8791\(02\)00038-6](https://doi.org/10.1016/S0001-8791(02)00038-6)
- Golembiewski, R. T., Billingsley, K., & Yeager, S. (1976). The congruence of factor-analytic structures: Comparisons of four procedures and their solutions. *Academy of Management Review, 1*(3), 27–35. <https://doi.org/10.5465/amr.1976.4400581>
- Granovetter, M. (1995). *Getting a job: A study of contacts and careers*. University of Chicago Press.
- Guan, Y., Arthur, M. B., Khapova, S. N., Hall, R. J., & Lord, R. G. (2019). Career boundarylessness and career success: A review, integration, and guide to future research. *Journal of Vocational Behavior, 110*, 390–402. <https://doi.org/10.1016/j.jvb.2018.05.013>
- Guan, Y., Deng, H., Sun, J., Wang, Y., Cai, Z., Ye, L., Fu, R., Wang, Y., Zhang, S., & Li, Y. (2013). Career adaptability, job search self-efficacy, and outcomes: A three-wave investigation among Chinese university graduates. *Journal of Vocational Behavior, 83*(3), 561–570. <https://doi.org/10.1016/j.jvb.2013.09.003>

- Guan, Y., Guo, Y., Bond, M. H., Cai, Z., Zhou, X., Xu, J., Zhu, F., Wang, Z., Fu, R., Liu, S., Wang, Y., Hu, T., & Ye, L. (2014). New job market entrants' future work self, career adaptability, and job search outcomes: Examining mediating and moderating models. *Journal of Vocational Behavior, 85*(1), 136–145. <https://doi.org/10.1016/j.jvb.2014.05.003>
- Guan, Y., Wang, F., Liu, H., Ji, Y., Jia, X., Fang, Z., Li, Y., Hua, H., & Li, C. (2015). Career-specific parental behaviors, career exploration, and career adaptability: A three-wave investigation among Chinese undergraduates. *Journal of Vocational Behavior, 86*, 95–103. <https://doi.org/10.1016/j.jvb.2014.10.007>
- Guan, Y., Wang, Z., Gong, Q., Cai, Z., Xu, S. L., Xiang, Q., Wang, Y., Chen, S. X., Hu, H., & Tian, L. (2018). Parents' career values, adaptability, career-specific parenting behaviors, and undergraduates' career adaptability. *The Counseling Psychologist, 46*(7), 922–946. <https://doi.org/10.1177/0011000018808215>
- Guan, Y., Yang, W., Zhou, X., Tian, Z., & Eves, A. (2016). Predicting Chinese human resource managers' strategic competence: Roles of identity, career variety, organizational support, and career adaptability. *Journal of Vocational Behavior, 92*, 116–124. <https://doi.org/10.1016/j.jvb.2015.11.012>
- Hackman, J. R., & Oldham, G. R. (1975). Development of the job diagnostic survey. *Journal of Applied Psychology, 60*(2), 159–170. <https://doi.org/10.1037/h0076546>
- Halbesleben, J. R. B., Neveu, J. P., Paustian-Underdahl, S. C., & Westman, M. (2014). Getting to the “COR”: Understanding the role of resources in conservation of resources theory. *Journal of Management, 40*(5), 1334–1364. <https://doi.org/10.1177/0149206314527130>
- Halbesleben, J. R. B., & Wheeler, A. R. (2008). The relative roles of engagement and embeddedness in predicting job performance and intention to leave. *Work and Stress, 22*(3), 242–256. <https://doi.org/10.1080/02678370802383962>
- Hall, M., & Smith, D. (2009). Mentoring and turnover intentions in public accounting firms: A research note. *Accounting, Organizations and Society, 34*(6–7), 695–704. <https://doi.org/10.1016/j.aos.2008.11.003>
- Harris, K. J., Wheeler, A. R., & Kacmar, K. M. (2011). The mediating role of organizational job embeddedness in the LMX–outcomes relationships. *The Leadership Quarterly, 22*(2), 271–281. <https://doi.org/10.1016/j.leaqua.2011.02.003>
- Hirschi, A. (2009). Career adaptability development in adolescence: Multiple predictors and effect on sense of power and life satisfaction. *Journal of Vocational Behavior, 74*(2), 145–155. <https://doi.org/10.1016/j.jvb.2009.01.002>
- Hobfoll, S. E. (1988). *The ecology of stress*. Hemisphere Publishing Corporation.
- Hobfoll, S. E. (1989). Conservation of resources: A new attempt at conceptualizing stress. *American Psychologist, 44*(3), 513–524. <https://doi.org/10.1037/0003-066x.44.3.513>
- Hobfoll, S. E. (2001). The influence of culture, community, and the nested-self in the stress process: Advancing conservation of resources theory. *Applied Psychology, 50*(3), 337–421. <https://doi.org/10.1111/1464-0597.00062>
- Hobfoll, S. E. (2002). Social and psychological resources and adaptation. *Review of General Psychology, 6*(4), 307–324. <https://doi.org/10.1037/1089-2680.6.4.307>
- Hobfoll, S. E., Halbesleben, J., Neveu, J. P., & Westman, M. (2018). Conservation of resources in the organizational context: The reality of resources and their consequences. *Annual Review of Organizational Psychology and Organizational Behavior, 5*(1), 103–128. <https://doi.org/10.1146/annurev-orgpsych-032117-104640>
- Hofstede, G. H. (2001). *Culture's consequences: Comparing values, behaviors, institutions, and organizations across nations*. Sage.
- Johnston, C. S. (2018). A systematic review of the career adaptability literature and future outlook. *Journal of Career Assessment, 26*(1), 3–30. <https://doi.org/10.1177/1069072716679921>
- Jones, G. (1986). Socialization tactics, self-efficacy, and newcomers' adjustments to organizations. *Academy of Management Journal, 29*(2), 262–279. <https://doi.org/10.5465/256188>
- Karavli, A., & Hall, T. (2006). How career variety promotes the adaptability of managers: A theoretical model. *Journal of Vocational Behavior, 69*(3), 359–373. <https://doi.org/10.1016/j.jvb.2006.05.009>
- Kiazad, K., Holtom, B., Hom, P., & Newman, A. (2015). Job embeddedness: A multifoci theoretical extension. *Journal of Applied Psychology, 100*(3), 641–659. <https://doi.org/10.1037/a0038919>
- Kidd, J., Jackson, C., & Hirsh, W. (2003). The outcomes of effective career discussion at work. *Journal of Vocational Behavior, 62*(1), 119–133. [https://doi.org/10.1016/s0001-8791\(02\)00027-1](https://doi.org/10.1016/s0001-8791(02)00027-1)
- Koen, J., Klehe, U. C., & Van Vianen, A. E. M. (2012). Training career adaptability to facilitate a successful school-to-work transition. *Journal of Vocational Behavior, 81*(3), 395–408. <https://doi.org/10.1016/j.jvb.2012.10.003>
- Li, W. D., Fay, D., Frese, M., Harms, P. D., & Gao, X. Y. (2014). Reciprocal relationship between proactive personality and work characteristics: A latent change score approach. *Journal of Applied Psychology, 99*(5), 948–965. <https://doi.org/10.1037/a0036169>
- Liang, Y., Zhou, N., Dou, K., Cao, H., Li, J. B., Wu, Q., Liang, Y., Lin, Z., & Nie, Y. (2020). Career-related parental behaviors, adolescents' consideration of future consequences, and career adaptability: A three-wave longitudinal study. *Journal of Counseling Psychology, 67*(2), 208–221. <https://doi.org/10.1037/cou0000413>
- Maggiori, C., Rossier, J., & Savickas, M. L. (2017). Career adapt-abilities scale–short form (CAAS–SF): Construction and validation. *Journal of Career Assessment, 25*(2), 312–325. <https://doi.org/10.1177/1069072714565856>
- Matijaš, M., & Seršić, D. M. (2021). The relationship between career adaptability and job-search self-efficacy of graduates: The bifactor approach. *Journal of Career Assessment, 29*(4), 683–698. <https://doi.org/10.1177/10690727211002281>
- McArdle, J. J. (2009). Latent variable modeling of differences and changes with longitudinal data. *Annual Review of Psychology, 60*(1), 577–605. <https://doi.org/10.1146/annurev.psych.60.110707.163612>

- Mitchell, T. R., Holtom, B. C., Lee, T. W., Sablynski, C. J., & Erez, M. (2001). Why people stay: Using job embeddedness to predict voluntary turnover. *Academy of Management Journal*, 44(6), 1102–1121. <https://doi.org/10.5465/3069391>
- Negru-Subtirica, O., Pop, E. I., & Crocetti, E. (2015). Developmental trajectories and reciprocal associations between career adaptability and vocational identity: A three-wave longitudinal study with adolescents. *Journal of Vocational Behavior*, 88, 131–142. <https://doi.org/10.1016/j.jvb.2015.03.004>
- Ng, T. W. H., & Feldman, D. C. (2007). Organizational embeddedness and occupational embeddedness across career stages. *Journal of Vocational Behavior*, 70(2), 336–351. <https://doi.org/10.1016/j.jvb.2006.10.002>
- Ng, T. W. H., & Feldman, D. C. (2010). The effects of organizational embeddedness on development of social capital and human capital. *Journal of Applied Psychology*, 95(4), 696–712. <https://doi.org/10.1037/a0019150>
- Nguyen, V., Taylor, G., & Bergiel, E. (2017). Organizational antecedents of job embeddedness. *Management Research Review*, 40(11), 1216–1235. <https://doi.org/10.1108/mrr-11-2016-0255>
- Noe, R. (1996). Is career management related to employee development and performance? *Journal of Organizational Behavior*, 17(2), 119–133. [https://doi.org/10.1002/\(sic\)1099-1379\(199603\)17:2<119::aid-job736>3.0.co;2-o](https://doi.org/10.1002/(sic)1099-1379(199603)17:2<119::aid-job736>3.0.co;2-o)
- Ocampo, A. C. G., Restubog, S. L. D., Liwag, M. E., Wang, L., & Petelczyc, C. (2018). My spouse is my strength: Interactive effects of perceived organizational and spousal support in predicting career adaptability and career outcomes. *Journal of Vocational Behavior*, 108, 165–177. <https://doi.org/10.1016/j.jvb.2018.08.001>
- Ocampo, A. C. G., Reyes, M. L., Chen, Y., Restubog, S. L. D., Chih, Y.-Y., Chua-Garcia, L., & Guan, P. (2020). The role of internship participation and conscientiousness in developing career adaptability: A five-wave growth mixture model analysis. *Journal of Vocational Behavior*, 120, 103426. <https://doi.org/10.1016/j.jvb.2020.103426>
- Pajic, S., Ulceluse, M., Kismihók, G., Mol, S. T., & den Hartog, D. N. (2018). Antecedents of job search self-efficacy of Syrian refugees in Greece and The Netherlands. *Journal of Vocational Behavior*, 105, 159–172. <https://doi.org/10.1016/j.jvb.2017.11.001>
- Pan, J., Guan, Y., Wu, J., Han, L., Zhu, F., Fu, X., & Yu, J. (2018). The interplay of proactive personality and internship quality in Chinese university graduates' job search success: The role of career adaptability. *Journal of Vocational Behavior*, 109(1), 14–26. <https://doi.org/10.1016/j.jvb.2018.09.003>
- Podsakoff, P. M., Mackenzie, S. B., Podsakoff, N. P., & Lee, J. Y. (2003). The mismeasure of man(agement) and its implications for leadership research. *The Leadership Quarterly*, 14(6), 615–656. <https://doi.org/10.1016/j.leaqua.2003.08.002>
- Praskova, A., & Johnston, L. (2021). The role of future orientation and negative career feedback in career agency and career success in Australian adults. *Journal of Career Assessment*, 29(3), 463–485. <https://doi.org/10.1177/1069072720980174>
- Qi, J., Li, J., & Zhang, Q. (2014). How organizational embeddedness and affective commitment influence job crafting. *Social Behavior and Personality: An International Journal*, 42(10), 1629–1638. <https://doi.org/10.2224/sbp.2014.42.10.1629>
- Ramos, K., & Lopez, F. G. (2018). Attachment security and career adaptability as predictors of subjective well-being among career transitioners. *Journal of Vocational Behavior*, 104, 72–85. <https://doi.org/10.1016/j.jvb.2017.10.004>
- Roberts, B. W., & Mroczek, D. (2008). Personality trait change in adulthood. *Current Directions in Psychological Science*, 17(1), 31–35. <https://doi.org/10.1111/j.1467-8721.2008.00543.x>
- Roberts, B. W., Wood, D., & Caspi, A. (2008). The development of personality traits in adulthood. In O. P. John, R. W. Robins, & L. A. Pervin (Eds.), *Handbook of personality: Theory and research* (3rd ed., pp. 375–398). Guilford Press.
- Robinson, R., Kralj, A., Solnet, D., Goh, E., & Callan, V. (2014). Thinking job embeddedness not turnover: Towards a better understanding of frontline hotel worker retention. *International Journal of Hospitality Management*, 36(1), 101–109. <https://doi.org/10.1016/j.ijhm.2013.08.008>
- Rudolph, C. W., & Zacher, H. (2021). Adapting to involuntary, radical, and socially undesirable career changes. *Current Psychology*, 1–12. <https://doi.org/10.1007/s12144-021-01859-5>
- Saks, A. M., & Ashforth, B. E. (1997). Organizational socialization: Making sense of the past and present as a prologue for the future. *Journal of Vocational Behavior*, 51(2), 234–279. <https://doi.org/10.1006/jvbe.1997.1614>
- Saks, A. M., Uggerslev, K. L., & Fassina, N. E. (2007). Socialization tactics and newcomer adjustment: A meta-analytic review and test of a model. *Journal of Vocational Behavior*, 70(3), 413–446. <https://doi.org/10.1016/j.jvb.2006.12.004>
- Savickas, M. L. (1997). Career adaptability: An integrative construct for life-span, life-space theory. *The Career Development Quarterly*, 45(3), 247–259. <https://doi.org/10.1002/j.2161-0045.1997.tb00469.x>
- Savickas, M. L. (2005). Career development and counseling: Putting theory and research to work. In S. D. Brown & R. W. Lent (Eds.), *The theory and practice of career construction* (pp. 42–70). Wiley.
- Savickas, M. L. (2013). Career construction theory and practice. In R. W. Lent & S. D. Brown (Eds.), *Career development and counseling: Putting theory and research to work* (2nd ed., pp. 147–183). Wiley.
- Savickas, M. L., & Porfeli, E. J. (2012). Career adapt-abilities scale: Construction, reliability, and measurement equivalence across 13 countries. *Journal of Vocational Behavior*, 80(3), 661–673. <https://doi.org/10.1016/j.jvb.2012.01.011>
- Schein, E. H. (2004). *Organizational culture and leadership* (3rd ed.). Jossey-Bass.
- Schuesslbauer, A. F., Volmer, J., & Göriz, A. S. (2018). The goal paves the way: Inspirational motivation as a predictor of career adaptability. *Journal of Career Development*, 45(5), 489–503. <https://doi.org/10.1177/0894845317718348>
- Seibert, S. E., Kraimer, M. L., & Liden, R. C. (2001). A social capital theory of career success. *The Academy of Management Journal*, 44(2), 219–237. <https://doi.org/10.2307/3069452>
- Singh, R., Ragins, B. R., & Tharenou, P. (2009). Who gets a mentor? A longitudinal assessment of the rising star hypothesis. *Journal of Vocational Behavior*, 74(1), 11–17. <https://doi.org/10.1016/j.jvb.2008.09.009>

- Sou, E. K. L., Yuen, M., & Chen, G. (2022). Career adaptability as a mediator between social capital and career engagement. *The Career Development Quarterly*, 70(1), 2–15. <https://doi.org/10.1002/cdq.12289>
- Spurk, D., Volmer, J., Orth, M., & Göritz, A. S. (2020). How do career adaptability and proactive career behaviors interrelate over time? An inter- and intraindividual investigation. *Journal of Occupational and Organizational Psychology*, 93(1), 158–186. <https://doi.org/10.1111/joop.12288>
- Strauss, K., Griffin, M., & Parker, S. (2012). Future work selves: How salient hoped-for identities motivate proactive career behaviors. *Journal of Applied Psychology*, 97(3), 580–598. <https://doi.org/10.1037/a0026423>
- Taber, B., & Blankemeyer, M. (2015). Future work self and career adaptability in the prediction of proactive career behaviors. *Journal of Vocational Behavior*, 86, 20–27. <https://doi.org/10.1016/j.jvb.2014.10.005>
- Taormina, R. J. (1997). Organizational socialization: A multidomain, continuous process model. *International Journal of Selection and Assessment*, 5(1), 29–47. <https://doi.org/10.1111/1468-2389.00043>
- Tian, A., Cordery, J., & Gamble, J. (2016). Staying and performing: How human resource management practices increase job embeddedness and performance. *Personnel Review*, 45(5), 947–968. <https://doi.org/10.1108/pr-09-2014-0194>
- Tian, Y., & Fan, X. (2014). Adversity quotients, environmental variables, and career adaptability in student nurses. *Journal of Vocational Behavior*, 85(3), 251–257. <https://doi.org/10.1016/j.jvb.2014.07.006>
- Tolentino, L. R., Garcia, P. R. J. M., Lu, V. N., Restubog, S. L. D., Bordia, P., & Plewa, C. (2014). Career adaptation: The relation of adaptability to goal orientation, proactive personality, and career optimism. *Journal of Vocational Behavior*, 84(1), 39–48. <https://doi.org/10.1016/j.jvb.2013.11.004>
- Van der Horst, A. C., Klehe, U. C., Brennikmeijer, V., & Coolen, A. C. M. (2021). Facilitating a successful school-to-work transition: Comparing compact career-adaptation interventions. *Journal of Vocational Behavior*, 128, 103581. <https://doi.org/10.1016/j.jvb.2021.103581>
- Van Maanen, J., & Schein, E. H. (1979). Toward a theory of organizational socialization. In B. M. Staw (Ed.), *Research in organizational behavior* (pp. 209–264). JAI Press.
- VandeWalle, D., & Cummings, L. (1997). A test of the influence of goal orientation on the feedback-seeking process. *Journal of Applied Psychology*, 82(3), 390–400. <https://doi.org/10.1037/0021-9010.82.3.390>
- Wheeler, A. R., Harris, K. J., & Sablinski, C. J. (2012). How do employees invest abundant resources? The mediating role of work effort in the job-embeddedness/job-performance relationship: Embeddedness, effort, and performance. *Journal of Applied Social Psychology*, 42, E244–E266. <https://doi.org/10.1111/j.1559-1816.2012.01023.x>
- Yang, F., & Wong, I. (2020). How do cyberspace friendships transition to favorable workplace outcomes? The self-team joint influence. *International Journal of Hospitality Management*, 85(1), 102363. <https://doi.org/10.1016/j.ijhm.2019.102363>
- Yao, X., Lee, T., Mitchell, T., Burton, J., & Sablinski, C. (2004). Job embeddedness: Current research and future directions. In R. Griffeth & P. Hom (Eds.), *Understanding employee retention and turnover* (pp. 153–187). Information Age.
- Zacher, H. (2014). Individual difference predictors of change in career adaptability over time. *Journal of Vocational Behavior*, 84(2), 188–198. <https://doi.org/10.1016/j.jvb.2014.01.001>
- Zhang, M., Fried, D., & Griffeth, R. (2012). A review of job embeddedness: Conceptual, measurement issues, and directions for future research. *Human Resource Management Review*, 22(3), 220–231. <https://doi.org/10.1016/j.hrmr.2012.02.004>
- Zhu, F., Cai, Z., Buchtel, E., & Guan, Y. (2019). Career construction in social exchange: A dual-path model linking career adaptability to turnover intention. *Journal of Vocational Behavior*, 112(1), 282–293. <https://doi.org/10.1016/j.jvb.2019>

**How to cite this article:** Cai, D., Li, Z., Xu, L., Fan, L., Wen, S., Li, F., Guan, Z., & Guan, Y. (2023). Sustaining newcomers' career adaptability: The roles of socialization tactics, job embeddedness and career variety. *Journal of Occupational and Organizational Psychology*, 96, 264–286. <https://doi.org/10.1111/joop.12423>