

## RESEARCH ARTICLE

Stemming the Tide: An Expanded Focus on Employee Turnover

# Job embeddedness and voluntary turnover in the face of job insecurity

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Email: [david.allen@tcu.edu](mailto:david.allen@tcu.edu)**Summary**

Two important contributions to the understanding of voluntary turnover are the ideas that employees become embedded in a net or web of restraining forces on- and off-the-job and that they experience varying degrees of control and desire that yield proximal withdrawal states explaining turnover motivations. We build on these ideas in two multi-wave studies to study job insecurity, one of the most common work stressors and top concerns among employees around the world. Study 1 demonstrates that job search mediates the positive relationship between job insecurity and voluntary turnover, and that employees higher in on-the-job embeddedness are less likely to search for jobs despite job insecurity. Study 2 demonstrates that turnover intention mediates the positive relationship between job insecurity and voluntary turnover, and that employees higher in on-the-job embeddedness are less likely to contemplate quitting despite job insecurity. However, off-the-job embeddedness had opposite interactive effects, exacerbating the relationship of job insecurity with turnover.

**KEYWORDS**

conservation of resources, job embeddedness, job insecurity, voluntary turnover

## 1 | INTRODUCTION

Because of global competition, health pandemics, economic downturns, and changing labor relations and technologies, organizations around the world have increasingly engaged in downsizing and restructuring to survive and stay competitive (Lin et al., 2021). These changes have made employees experience increasing job uncertainty—powerlessness to maintain desired continuity in a threatened job situation—that is typically conceptualized and operationalized as a subjective phenomenon that is “in the eye of the beholder” (Greenhalgh & Rosenblatt, 1984, p. 438). Job insecurity has been

linked to a range of outcomes, including job search and turnover intention (for reviews, see Cheng & Chan, 2008; De Witte et al., 2015; Jiang & Lavaysse, 2018; Jiang et al., 2022; Shoss, 2017). At the same time, accumulated research has shown inconsistent and weak direct job insecurity–outcome relationships, and less attention has been given to moderating constructs that can help to explain these weak and inconsistent effects (Jiang & Lavaysse, 2018). This is important because not all individuals have similar evaluations and responses to the same level of job insecurity (Jiang & Lavaysse, 2018; Probst, 2003).

We draw upon conservation of resources (COR) theory (Hobfoll, 1989) to consider why some employees faced with the threat of possible job loss respond by preemptively attempting to

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secure alternative employment and leave their organizations while others do not. Specifically, we focus in this paper on the moderating effects of job embeddedness (Mitchell et al., 2001)—“the combined forces that keep a person from leaving his or her job” (Yao et al., 2004, p. 159)—to examine how employees respond to perceived job insecurity for two reasons. First, job embeddedness theory describes how on- and off-the-job factors influence various outcomes (Kiazad et al., 2015; Mitchell et al., 2001), and research shows job embedding forces constrain withdrawal processes by making employees feel “stuck” even in adverse work conditions (Allen et al., 2016). The seminal work emphasizes this “stuckness” idea by stating that job embeddedness “represents a focus on the accumulated, generally nonaffective, reasons why an employee would not leave a job, which comprise a sort of stuckness, inertia, or bias toward the status quo” (Mitchell et al., 2001, p. 1108). Thus, embeddedness can be used to describe how employees react in different ways to perceived job insecurity. Second, theoretical developments emphasize the connections of job embeddedness with the conservation of valuable resources. Kiazad et al. (2015) build on COR theory to suggest that job embeddedness can be explained by one’s motivation to accumulate, allocate, and guard personally valued resources. Job embeddedness may alleviate some negative effects of job insecurity and also make employees feel “stuck” in their organizations (Allen et al., 2016). Thus, employees high in embeddedness might simultaneously perceive job insecurity as a threat to their valued resources but be reluctant to search for alternatives or to quit due to their unwillingness to give up accumulated embedded resources.

This study aims to provide two main contributions. First, we use job embeddedness theory to respond to repeated calls to elucidate how perceived job insecurity is related to work outcomes (e.g., De Witte, 1999; Jiang & Lavaysse, 2018; Selenko & Batinic, 2013). Although employees can react to job insecurity in myriad ways (Jiang & Lavaysse, 2018), we focus here on voluntary turnover due to its substantial effects on employees and organizations. For example, hiring and replacement costs of voluntary turnover—“voluntary cessation of membership in an organization by an individual who receives monetary compensation for participation in that organization” (Hom & Griffeth, 1995, p. 5)—are estimated to be as high as 90–200% of an employee’s annual salary (Allen et al., 2010). While job insecurity is inherently linked with the nature of one’s employment relationship with the organization, recent meta-analyses on job insecurity and turnover, respectively, included only a few studies on voluntary turnover ( $k = 7$ ) (Jiang & Lavaysse, 2018) and job security ( $k = 5$ ) (Rubenstein et al., 2018). Jiang and Lavaysse (2018) make two relevant points about the implications of considering job insecurity from a COR perspective. One is that the value of the resource under threat (i.e., the job and the tangible or psychic benefits associated with it) matters. We specify that job embeddedness is a key indicator of resource value in this context. The other is that employees under threat might be motivated to redirect resources away from their current job. Thus, we hypothesize that some employees redirect resources toward identifying and securing alternative employment opportunities. In two studies, we demonstrate that job insecurity does

increase the likelihood of turnover through indicators of considering alternative employment opportunities (job search in Study 1; turnover intentions in Study 2), but this relationship is moderated by on-the-job embeddedness in a way that less embedded employees are more likely to respond to insecurity by searching or planning to leave.

Second, we consider different foci of job embeddedness as indicators of resource value. We suggest that the domain in which a person is more focused on resource preservation matters and thus examine the possibility that while on-the-job embeddedness can mitigate the likelihood that job insecurity fosters the turnover process, off-the-job embeddedness may exacerbate these effects. In Study 2, we thus constructively replicate the conceptual logic of Study 1 in a different sample and considering turnover intentions as the mediator between job insecurity and voluntary turnover. We also investigate proposed differential interactive effects of both on- and off-the-job embeddedness between job insecurity and turnover intentions. Although theory and research has focused primarily on-the-job embeddedness (Jiang et al., 2012; Lee et al., 2014), the findings of Study 2 add to research on embeddedness by suggesting that on- and off-the-job embeddedness dimensions are valuable in tandem but should also be distinguished.

## 2 | CONCEPTUAL FRAMEWORK

COR theory (Hobfoll, 1989) states that individuals are motivated to accumulate, protect, and allocate valuable resources—“those objects, personal characteristics, conditions, or energies that are valued” (p. 516)—because resources help them to meet and attain valued goals, external demands, or guard against future resource loss. Examples of object resources are tools for work, condition resources include employment and seniority, personal resources include key skills and personality traits, and energy resources include knowledge and money (Hobfoll et al., 2018). Individuals having more personally valuable resources are more able to acquire additional resources and less sensitive to resource deprivation. Resources also buffer stressors and keep them from turning into strains (Hobfoll, 1989). In contrast, a loss of resources, threat to resources (imagined or real), or failure to recoup resources following an investment are stressors that invoke strain (Hobfoll, 1989). A lack of valued resources can make individuals experience cycles of resource losses that are accompanied by detrimental outcomes (Hobfoll, 2001). Because resources are important for survival, individuals are sensitive to resource loss, which makes the threat of loss highly salient (Shoss et al., 2022). In COR theory, the resource loss cycle principle suggests that individuals can reach a point where their resources are completely exhausted (Halbesleben et al., 2014). COR theory further maintains that the loss of resources is more salient and motivating to individuals than potential gains, and that individuals try to prevent short-term resource loss even if it would result in greater longer-term gains (Halbesleben et al., 2014). Moreover, COR theory (Hobfoll, 2011) suggests that “resource caravans” (as the associations of linked resources) are developed and sustained within a resource caravan passageway—the conditions that

promote, support, facilitate, and protect individual's resources. This suggests that resources do not exist individually but tend to travel in packs or bundles.

Job insecurity is defined and operationalized as a perceptual phenomenon of the potential threat to the stability of one's present job (Jiang & Lavaysse, 2018). From the COR perspective, job insecurity presents a threat to valued resources. Specifically, COR theory (Hobfoll, 1989, p. 516) suggests that employment is a valued resource "[...] people strive to retain, protect, and build and that what is threatening to them is the potential or actual loss of these resources." Because job security represents primarily object and condition-related resources (Selenko et al., 2013), we envision that job insecurity presents threats to these types of resources. While job insecurity may evolve over time, it is conceptualized and empirically shown to be a chronic stressor that persists (de Witte, 1999; Mauno et al., 2001). Further, while job insecurity can be described as an objective phenomenon (Greenhalgh & Rosenblatt, 1984), we focus here on subjective job insecurity because it is shown to be more consistently related to various work outcomes (Sverke et al., 2002), better capture interpersonal variations in job insecurity (Ferrie, 2001), and because employees often perceive the possibility of job loss in subjective terms (Klandermans & van Vuuren, 1999). It should also be mentioned that job insecurity differs from losing a job because in the latter occasion job loss becomes a certainty.

Although we postulate that job insecurity could motivate some employees to reallocate resources toward preemptively leaving their organizations, job embeddedness theory (Mitchell et al., 2001) can be used to explain why some employees choose to stay as they are enmeshed in their organizations. In contrast to seminal turnover theories (e.g., March & Simon, 1958; Mobley, 1977), job embeddedness is rooted in the idiosyncratic attachments of employees to their on- and off-the-job surroundings (Mitchell & Lee, 2001). Specifically, job embeddedness consists of interrelated dimensions that occur on- (i.e., organization) and off-the-job (i.e., community): (1) links (i.e., formal and informal work and non-work-related ties with individuals, institutions, or issues), (2) fit (i.e., comfort and fit with one's organization and community), and (3) sacrifice (i.e., cost of tangible and intangible benefits that would be forfeited by quitting). To the degree employees perceive higher levels of any or all these on- and off-the-job dimensions, the more they become embedded in their organization and community, and thereby the stronger are the combined set of forces that restrain quitting (Allen et al., 2016). While on-the-job embeddedness refers to how tied one is to his or her organization, off-the-job embeddedness refers to how tied one is to his or her community (Crossley et al., 2007). In research, the link, fit, and sacrifice dimensions are typically collapsed across on- and off-the-job foci to form job embeddedness (Porter et al., 2019). This study also uses global on- and off-the-job embeddedness measures.

Beyond restraining quitting, job embeddedness is conceptualized (Kiazad et al., 2015) and shown (Burton et al., 2010) to act as a valuable resource for employees that buffer from personal resource losses from aversive workplace conditions. Thus, job embeddedness is a state of abundant resources (Halbesleben & Wheeler, 2008)—the links

are person-to-person relationship resources; the fit belonging that an individual feels with the job, organization, and community; and the sacrifice the primacy-of-loss tenets of COR. Prior works suggest that job embeddedness entails object, condition, and energy-related resources (Allen et al., 2016; Kiazad et al., 2015). Employees invest job embeddedness resources to build future embeddedness resources (i.e., resource gain spiral; Wheeler et al., 2012). Job embeddedness thus acts as a cumulative personal resource or resource caravan that has more value when bundled than in parts—employees with greater resources are capable of bundling resources together to create even greater stores of resources (Wheeler et al., 2012). COR theory (Hobfoll, 1989) also suggests that employees are motivated to keep accumulated resources and guard against actual or potential resource loss. Because aversive workplace conditions (e.g., job insecurity) can create actual or potential threat to accumulated embeddedness-related resources (e.g., job-related perks and work-related ties), highly embedded employees may respond differently to job insecurity than less embedded employees. Halbesleben and Wheeler (2008) also proposed that engaged employees become more embedded when they acquire more resources and when quitting is accompanied by making more sacrifices or relinquishing more personally valued resources. Allen et al. (2016) revealed another angle between COR and job embeddedness theories by arguing and empirically showing that even in adverse work settings, employees who are embedded or “stuck” are less likely to quit because their concerns about potential resource loss outweigh their desire to leave their aversive situation. We suggest that a similar rationale can be used to explain why highly embeddedness employees are less likely to search for jobs and intend to leave when perceiving high job insecurity.

Linking job embeddedness to direct antecedents (e.g., intentions) and actual leaving behavior, Hom et al. (2012) proposed proximal withdrawal states theory (PWST). Specifically, PWST supplements job embeddedness theory by “separating affect from perceived freedom and clarifying the etiology of experienced autonomous control” (Hom et al., 2012, p. 850). From the PWST perspective, the moderating effect of embeddedness between job insecurity and turnover process is complex. PWST states that employee turnover is a function of employee preferences to stay or leave and control over the stay or leave decision. Highly embedded employees can typically be classified as enthusiastic stayers who “stay until retire or disabled” (Hom et al., 2012, p. 846) or reluctant leavers who “want to stay but must leave” (p. 843). Enthusiastic (engaged) stayers are highly embedded by behavioral and intrinsic forces and less willing to leave due to high turnover costs, that is, resource losses. Reluctant leavers in turn want to stay but are pressured to leave due to behavioral or normative forces. Although both these withdrawal states are possible, we envision that an employee who is deeply embedded could be a reluctant stayer who remains as long as he or she has to or until something happens to remove barriers to leaving. Employees with high embeddedness and low work engagement are also presented as miserable stayers (Halbesleben & Wheeler, 2008). Through the PWST perspective, the role of job insecurity on leaving can be less clear. In some ways, job insecurity presenting threat to accumulated resources can

be thought of as diminishing an employee's control over the stay or leave decision. However, especially in the case of subjective job insecurity, the employee is not immediately being faced with a strong push to leave, and their perceptions on job insecurity may not be accurate. For example, employees can experience job insecurity during downsizing and restructuring but not be asked to leave.

Our COR perspective on job insecurity and embeddedness can inform and be informed by PWST because it suggests that job insecurity might create a kind of liminal state of uncertain control over staying or leaving coupled with the threat of potential resource loss if being pushed out were to occur. This is because we envision that employees with high levels of embeddedness who also feel job insecurity are something akin to “nervous stayers” because they are reluctant to give up accumulated personal job embedded-related resources (Allen et al., 2016; Kiazad et al., 2015) but at the same time can suffer from being stuck in conditions of perceived job insecurity (Jiang & Lavaysse, 2018; Shoss, 2017). These nervous stayers might be concerned about being forced into becoming reluctant leavers and also feel stuck in their organizations due to high job embeddedness. These employees can be related to the PWST subtype of resistant leavers (Hom et al., 2012), those being forced to leave accompanied by high personal sacrifices associated with leaving or high normative pressures to stay. Due to the uncertainty and liminality of living with job insecurity, we think it can be premature to categorize these employees as leavers as there is no specific loss of control yet.

Although we position job insecurity and embeddedness as operating in tandem, only a few studies have considered them in conjunction. Previous research suggests that on-the-job embeddedness mediates the relationships between perceived job insecurity and job search (Murphy et al., 2013), service recovery performance, and turnover intentions (Safavi & Karatepe, 2019). On-the-job embeddedness is also found to moderate the relationships between job insecurity and emotional exhaustion (Allen et al., 2016), unethical organizational behavior (Ghosh, 2017), and job performance (Qian et al., 2019). However, we still know little about the interactive effects of embeddedness with job insecurity and its proximal and distal outcomes. Moreover, because previous research has focused on on-the-job embeddedness, we know little about potential moderating effects of both on- and off-the-job embeddedness.

Integrating our COR perspective, we suggest that job security and job embeddedness should be adaptive together in the sense of being self-reinforcing resources (e.g., strong job security should be associated with feeling more embedded). However, given the primacy of resource loss for motivating behavior (Halbesleben et al., 2014), job embeddedness can hinder individual adaptation to threat of job loss. That is, even if searching for alternatives could be an adaptive response to job insecurity, the additional threat of resource loss associated with leaving a job in which one is highly embedded tends to make this less likely. Thus, one is likely to act to preserve valued resources in the short run, even if it would be more adaptive in the long run to seek more stable employment (Halbesleben et al., 2014). Because job loss or job change does not always involve moving to a new location (Allen, 2006) and because prior work conceptualizes

embeddedness domain as an indicator of resource investment and value (Rubenstein et al., 2020), there might also be value in differentiating the locus of embeddedness.

Addressing the above-mentioned gaps in research, we develop and test hypotheses in two time-lagged studies with independent samples. In Study 1, we examine the moderating effect of on-the-job embeddedness between job insecurity and job search, which mediates the relationship between job insecurity and voluntary turnover. In Study 2, we use a different sample of full-time employees to examine moderating effects of both on- and off-the-job embeddedness between job insecurity and turnover intentions, which mediates the relationship between job insecurity and turnover. This way, we constructively replicate the findings of Study 1 and go a step beyond searching for potential alternatives to consider that employees who feel job insecurity are more likely to develop intentions to leave and to turnover, but these relationships are moderated by both types of embeddedness.

### 3 | STUDY 1

Job insecurity signals a perceived threat to employment as a valued resource (König et al., 2010) and the potential loss of resources in the present organization (De Witte, 1999). Work is a resource that individuals often value not only for its ability to enhance the attainment of other valued resources such as income, benefits, social status, and social relations but also for meaningful work and fulfilling social relations it can provide. The perceived loss of such resources can provoke a stress reaction which in turn prompts for action to change the situation (Hobfoll, 1989). While employees are not often able to change the causes of job insecurity in their organization, they might seek to change this adverse situation by job search—a goal-directed, self-regulatory process in which affect, behavior, and cognition are used to prepare for identifying and pursuing new job opportunities. For instance, Greenhalgh and Rosenblatt (1984) argued that a rational reaction for employees perceiving job insecurity is to search more stable and secure employment. A meta-analysis (Jiang & Lavaysse, 2018) and research also show job insecurity to be positively related with job search (Lim, 1996; Reisel & Banai, 2002).

We use COR theory to suggest that job insecurity is positively related with voluntary turnover. When people perceive job insecurity, one of their most valued personal resources—being employed—is under threat. In the case of job insecurity, COR theory (Hobfoll, 1989) suggests that people seek to guard resources by withdrawing from stressful situations that are perceived to deplete these resources. They can do so by searching for new jobs (Greenhalgh & Rosenblatt, 1984) and subsequently quitting and changing their jobs (Blau, 2007; Filipkowski & Johnson, 2008). In some support, a study with 221 medical technologists in the United States suggests how that job insecurity is positively related with voluntary turnover (Blau, 2007), and a study with 699 employees in Belgium suggests that job insecurity through rumination is positively related with voluntary turnover (Richter et al., 2020). Through the PWST lens (Hom

et al., 2012), people leaving their organizations due to perceived job insecurity could be classified as enthusiastic leavers or reluctant leavers. A study also suggests that enthusiastic leavers often display job search activities (Li et al., 2016). However, it can be the case that job insecure leavers are more reluctant, only searching and leaving because their job-related resources are under threat.

Job search is a key component of turnover models, typically regarded as a proximal predictor of voluntary turnover (Griffeth et al., 2005; Hom & Griffeth, 1991; Mobley, 1977). COR theory (Hobfoll, 1989) in turn holds that stable employment provides a pool of resources that has instrumental value for employees such as personal resources (e.g., skills) and objects (e.g., a house). From the COR perspective, people choose to stay in their organizations to the extent that it provides personally valued resources. When they experience resource depletion in terms of job insecurity, their job search activity, and subsequent turnover tend to increase. This suggests that voluntary turnover represents not only an escape from job insecurity as a resource-depleting situation but also an opportunity to accumulate new resources. That is, employees are motivated to redirect some of their resources toward identifying alternative opportunities that could replace the job-related resources under threat. In some support, a meta-analysis suggests that job search is positively related with positive outcomes, including finding a new job (Kanfer et al., 2001). Specifically, we think the job insecurity–turnover relationship is indirect because these employees might not necessarily want to leave, but instead are being led to consider leaving by the threat of being forced to do so. Thus, they are likely to attempt to line up an alternative before quitting.

**Hypothesis 1.** Job search mediates the positive relationship between job insecurity and voluntary turnover.

While job insecurity can increase job search behavior for some employees, we propose that high on-the-job embeddedness (as a global construct) will mitigate this relationship. Thus, we regard embeddedness as not only a bundle of resources (Kiazad et al., 2015; Wheeler et al., 2012) but also an indicator of resource investments (Rubenstein et al., 2020; Wheeler et al., 2012). Highly embedded employees tend to have a good fit with their job and organization, strong links with coworkers, and material and psychological sacrifices associated with quitting (Mitchell et al., 2001). Essentially, employees might be more concerned with losing their valued work-related resources when their on-the-job embeddedness is high. Therefore, high on-the-job embeddedness—making employees more connected and tied to organizations (Crossley et al., 2007)—can make the possibility of searching for alternatives a less attractive response option for those perceiving job insecurity.

From the COR perspective, people choose to remain in organizations to avoid the loss of valuable intrinsic/instrumental resources (Allen et al., 2016; Kiazad et al., 2015); high on-the-job embeddedness can mitigate job search activities despite job insecurity because of the primacy-of-resource-loss principle (Hobfoll, 2001). Given that people seek to protect themselves from actual or perceived resource losses

(Hobfoll, 1989) and that job search activities and subsequent job change can cause drain of accumulated embeddedness-related resources, they may, despite job insecurity, refrain from searching for alternative job opportunities. Furthermore, given the primacy of resource loss over resource gain (Hobfoll, 2001), employees are more likely to value maintaining embeddedness-related resources in the present organization rather than seeking to divert attention to accumulating potential resources in a new organization (Kiazad et al., 2015). However, in line with COR theory (Hobfoll, 1989), when their on-the-job embeddedness is low, we expect that people feeling job insecurity are more likely to redirect resource toward finding an alternative and are more likely to search for jobs. In sum, we expect that the positive indirect effect of job insecurity on turnover through job search is stronger for employees with lower levels of on-the-job embeddedness.

**Hypothesis 2.** On-the-job embeddedness moderates the indirect relationship between job insecurity and voluntary turnover through job search; in the first-stage mediation, the positive relationship between job insecurity and job search is weaker when on-the-job embeddedness is high.

## 4 | METHOD

### 4.1 | Sample and procedure

We relied on a research company to collect data with three surveys at three-time points from people employed full-time in various privately owned organizations in Japan. Participation in these online surveys was voluntary. The research company gave respondents small incentives in terms of online shopping points. At Time 1, by surveys sent to 1600 employees fulfilling our screening criteria, we measured control variables, job insecurity, and on-the-job embeddedness (800 respondents: 50% response rate). At Time 2 (3 months after Time 1), we measured job search (755 respondents: 94% response rate). At Time 3 (24 months after Time 1), we measured voluntary turnover (509 respondents: 67% response rate). We used identification numbers given by the research company to link these surveys.

Our time lags were guided by scholarly recommendations, prior research, and context-related reasons. The time lag between Time 1 and Time 2 was chosen in line with prior research on job insecurity and job search (e.g., Jiang, 2017; Lim, 1996) and to minimize attrition between Time 1 and Time 2 surveys (e.g., Huang et al., 2012; Shoss et al., 2022). In research on voluntary turnover, time lags between 6 months and 24 months have been recommended (Hom et al., 2012), and a review of turnover methods identified a mean turnover measurement lag of 21 months (Allen et al., 2014). We used the time lag of 24 months consistent with this recommendation and because of the low turnover ratio in Japan that ranges annually only between 5% and 10% (Statistics Bureau of Japan, 2020). Perhaps due to the low average turnover, research on voluntary turnover in Japan has used time lags of up to 4 years (e.g., Kachi et al., 2020).

We listwise deleted those people who did not answer to all surveys and 12 employees who left their organizations for involuntary reasons, including downsizing. The final sample size was 497 employees. We compared those employees who participated in all surveys with those employees who did not by using age, gender, job insecurity, on-the-job embeddedness, and voluntary–involuntary data but we did not find any significant differences. In our final sample, the average age of employees was 36 years (72% male). They were employed in organizations from various industries, including manufacturing (35%), transport and communication (19%), service (18%), retail (10%), finance and insurance (8%), construction (3%), and others (7%).

## 5 | MEASURES

The method of back translation (Brislin, 1980) was used to translate original survey items from English to Japanese. Unless otherwise stated, we measured all items by 7-point (1 = *strongly disagree*, 7 = *strongly agree*) Likert-type scales.

### 5.1 | Job insecurity

We measured this using a four-item scale by Mauno et al. (2001). A sample item is “I am worried about the possibility of being fired” ( $\alpha = .70$ ).

### 5.2 | On-the-job embeddedness

We measured this using the original seven-item scale by Crossley et al. (2007). This measure allows participants to incorporate information from their own judgment because it assesses general than specific aspects and captures the unique weights that an individual place on different facets when forming a summary perception (Crossley et al., 2007). In instructions, we asked the respondents to focus only on work-related aspects. A sample item is “I feel tied to this organization” ( $\alpha = .78$ ).

### 5.3 | Job search

We measured this using a four-item scale by Peters et al. (1981). A sample item is “I often spend time searching for new jobs” ( $\alpha = .93$ ).

### 5.4 | Voluntary turnover

Following prior research (Allen et al., 2016; Rubenstein et al., 2018), we asked the participants in Time 3 if they were still working for the same organization. If they had quit their organizations, we also asked them whether their turnover was voluntary or involuntary and

retained only those who voluntarily quit. We coded voluntary turnover “0” for stayers and “1” for leavers.

## 5.5 | Control variables

We controlled for tenure in the present organization because people with longer tenure have higher embeddedness and a lower turnover propensity (Ng & Feldman, 2009). We also controlled for age, because younger employees have high turnover rates (Griffeth et al., 2000), and gender because women have a higher turnover propensity (Cotton & Tuttle, 1986). Furthermore, we controlled for education level because higher education as a source of human capital can facilitate voluntary turnover (Trevor, 2001). Finally, we controlled for job alternatives because it facilitates voluntary turnover (Crossley et al., 2007) and measured it by using a three-item scale by Peters et al. (1981). A sample item is “It is possible for me to find a better job than the one I have now” ( $\alpha = .85$ ).

## 6 | RESULTS

We used AMOS Version 23 to conduct confirmatory factor analysis (CFA). Our four-factor model—job insecurity, job search, on-the-job embeddedness, and job alternatives—had a good fit with the data;  $\chi^2 = 489.93_{(127)}$ ,  $p < .001$ ; comparative fit index (CFI) = 0.92; Tucker–Lewis index (TLI) = 0.91; root-mean-square error of approximation (RMSEA) = 0.07 (Hu & Bentler, 1999). We compared our four-factor model with various alternative models, which all provided a worse fit with the data. For instance, a three-factor model in which job insecurity and job search were combined to one factor had a worse fit with the data:  $\chi^2 = 1004.52_{(177)}$ ,  $p < .001$ , CFI = 0.84, TLI = 0.82, RMSEA = 0.10). Table 1 provides descriptive statistics and correlations.

We used mean-centered variables to test our hypotheses with STATA Version 14 and PROCESS Version 23 macro (Hayes, 2013) with SPSS version 23 to analyze mediation and moderated mediation effects with 5000 bias-corrected bootstrapped samples. See Table 2 for the results.

Hypothesis 1 predicts job search to mediate the positive relationship between job insecurity and voluntary turnover. Job insecurity had positive relationships with job search ( $B = .33$ ,  $p = .000$ ; 95% Confidence Intervals [CI] 0.22, 0.43) and voluntary turnover ( $B = .36$ ,  $p = .029$ ; 95% CI [0.04, 0.68]), and job search had a positive relationship with voluntary turnover ( $B = .40$ ,  $p = .000$ ; 95% CI [0.18, 0.61]). The odds ratios, respectively, showed that it is 1.43 and 1.49 times more likely that an employee quits if job insecurity and job search increase by one unit. Because the indirect effect through job search was also significant ( $B = .19$ , 95% CI [0.09, 0.32]), the results support Hypothesis 1.

Hypothesis 2 predicted on-the-job embeddedness to moderate the indirect relationship between job insecurity and turnover through job search; in the first stage mediation, the positive relationship between job insecurity and job search is weaker when on-the-job embeddedness is high. In Table 2, the interaction term was significant

**TABLE 1** Descriptive statistics and intercorrelations (Study 1).

| Variable                   | M     | SD   | 1      | 2      | 3      | 4     | 5      | 6      | 7      | 8     |
|----------------------------|-------|------|--------|--------|--------|-------|--------|--------|--------|-------|
| 1. Gender                  | 0.72  | 0.45 |        |        |        |       |        |        |        |       |
| 2. Age                     | 36.71 | 8.34 | .06    |        |        |       |        |        |        |       |
| 3. Tenure (years)          | 8.18  | 7.77 | .06    | .58**  |        |       |        |        |        |       |
| 4. Education level         | 3.64  | 0.91 | .05    | -.31** | -.20** |       |        |        |        |       |
| 5. Job alternatives        | 3.21  | 1.03 | .06    | -.25** | -.21** | .16** |        |        |        |       |
| 6. Job insecurity          | 3.99  | 0.92 | -.12** | .01    | -.03   | .01   | -.16** |        |        |       |
| 7. On-the-job embeddedness | 3.27  | 0.79 | -.05   | .02    | .13**  | -.08  | -.19** | -.26** |        |       |
| 8. Job search              | 2.65  | 1.31 | .04    | -.08   | -.14** | .03   | .26**  | .28**  | -.39** |       |
| 9. Voluntary turnover      | 0.14  | 0.34 | -.01   | .01    | -.05   | -.04  | .10*   | .12**  | -.24** | .27** |

Note: N = 497. Gender (female = 0, male = 1); education level (1 = middle school, 2 = high school, 3 = vocational school/two-year university, 4 = Bachelor's degree, 5 = Master's/PhD).

\*p < .05, and \*\*p < .01.

**TABLE 2** Regression analyses (Study 1).

| Job search  | B    | $\beta$ | SE   | t        | p    | LLCI  | ULCI  |      |
|---|------|---------|------|----------|------|-------|-------|------|
| Gender  | -.01 | -.01    | 0.11 | -0.12    | .907 | -0.23 | 0.21  |      |
| Age   | -.00 | -.01    | 0.01 | -0.12    | .904 | -0.02 | 0.01  |      |
| Tenure  | -.01 | -.05    | 0.01 | -1.14    | .256 | -0.02 | 0.01  |      |
| Education level   | -.08 | -.06    | 0.06 | -1.38    | .169 | -0.19 | 0.03  |      |
| Job alternatives  | .34  | .27     | 0.05 | 6.37     | .000 | 0.23  | 0.44  |      |
| Job insecurity  | .33  | .25     | 0.05 | 6.08     | .000 | 0.22  | 0.43  |      |
| On-the-job embeddedness                                 | -.32 | -.25    | 0.05 | -5.96    | .000 | -0.43 | -0.22 |      |
| Job insecurity × on-the-job embeddedness                | -.12 | -.11    | 0.04 | -2.86    | .004 | -0.20 | -0.04 |      |
| R   |      |         |      | 0.50     |      |       |       |      |
| R <sup>2</sup>  |      |         |      | 0.26     |      |       |       |      |
| F   |      |         |      | 21.92    | .000 |       |       |      |
| Conditional effect at levels of on-the-job embeddedness |      |         |      |          |      |       |       |      |
| -1 SD   | .48  | .34     | 0.07 | 6.54     | .000 | 0.34  | 0.63  |      |
| M   | .35  | .24     | 0.06 | 6.08     | .000 | 0.24  | 0.47  |      |
| +1 SD   | .22  | .15     | 0.07 | 3.06     | .002 | 0.08  | 0.37  |      |
| Voluntary turnover                                      | B    | $\beta$ | SE   | Z        | Odds | p     | LLCI  | ULCI |
| Gender  | -.29 | -.06    | 0.30 | -0.97    | 0.75 | .334  | -0.89 | 0.29 |
| Age   | .01  | .06     | 0.02 | 0.71     | 1.01 | .479  | -0.02 | 0.05 |
| Tenure  | -.01 | -.07    | 0.02 | -0.55    | 0.99 | .584  | -0.05 | 0.03 |
| Education level   | -.20 | -.09    | 0.15 | -1.28    | 0.82 | .201  | -0.50 | 0.10 |
| Job alternatives  | .27  | .14     | 0.14 | 1.83     | 1.31 | .067  | -0.01 | 0.55 |
| Job insecurity  | .36  | .17     | 0.16 | 2.19     | 1.43 | .029  | 0.04  | 0.68 |
| Job search  | .40  | .26     | 0.11 | 3.56     | 1.49 | .000  | 0.18  | 0.61 |
| Model $\chi^2$ (df)                                     |      |         |      | 35.74(7) |      | .000  |       |      |
| Log likelihood  |      |         |      | -186.25  |      |       |       |      |
| Pseudo R <sup>2</sup>                                   |      |         |      | .09      |      |       |       |      |

Note: N = 497. B = unstandardized coefficient;  $\beta$  = standardized coefficient; SE = standard error; CI = confidence interval; LL = lower limit; UL = upper limit.

( $B = -.12, p = .004; 95\% \text{ CI } [-0.20, -0.04]$ ). In Figure 1, conditional slopes showed that the relationship between job insecurity and job search is weaker when on-the-job embeddedness is high. The Johnson–Neyman results of 95% region of significance showed that the conditional effects of on-the-job embeddedness are significant for values less than 4.12. The indirect effect of job insecurity on voluntary turnover through job search is weaker when on-the-job embeddedness was high ( $B = .09, 95\% \text{ CI } [0.02, 0.18]$ ) and stronger when on-the-job embeddedness is low ( $B = .19, 95\% \text{ CI } [0.08, 0.34]$ ). Because the index of moderated mediation was also significant ( $B = -.06, 95\% \text{ CI } [-0.14, -0.02]$ ), the results support Hypothesis 2.

To rule out the control variables as a potential explanation for the results (Becker, 2005), we tested Hypotheses 1 and 2 with identical analyses as above without control variables. The results were similar. Hypothesis 1: Job insecurity had positive relationships with job search ( $B = .25, p = .000; 95\% \text{ CI } [0.14, 0.35]$ ) and voluntary turnover ( $B = .34, p = .025; 95\% \text{ CI } [0.04, 0.63]$ ), and job search had a positive relationship with voluntary turnover ( $B = .45, p = .000; 95\% \text{ CI } [0.25, 0.66]$ ). The indirect effect through job search was also significant ( $B = .12, 95\% \text{ CI } [0.05, 0.21]$ ). Hypothesis 2: the interaction term was significant ( $B = -.14, p = .018; 95\% \text{ CI } [-0.25, -0.02]$ ).

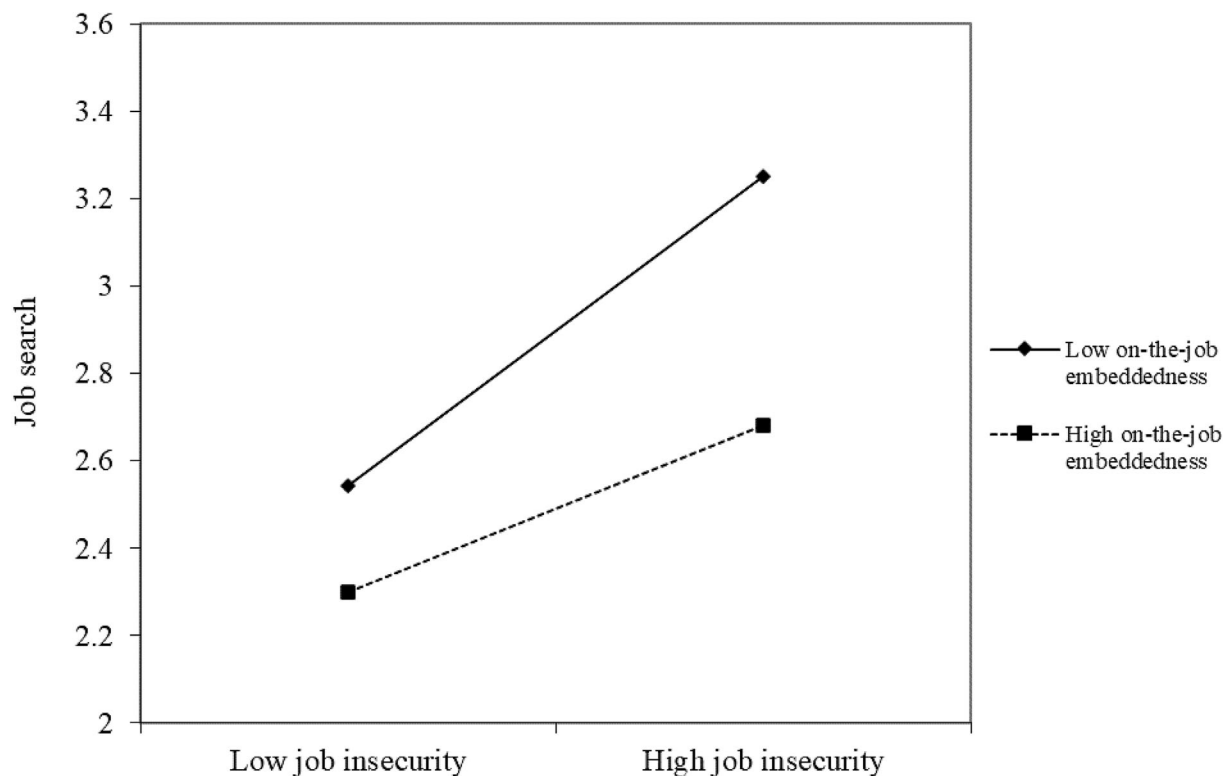
## 7 | STUDY 1: DISCUSSION

Study 1 provides support to our COR theory-based theorization and hypotheses that job search mediates the positive relationship

between job insecurity and voluntary turnover, and that employees high in on-the-job embeddedness are less likely to search for jobs when perceiving job insecurity than those lower in on-the-job embeddedness. From the COR perspective (Hobfoll, 1989; Kiazad et al., 2015), our findings suggest that employees can be reluctant to give up their valued on-the-job embeddedness-related resources and therefore choose not to search for alternatives as a reaction to perceived threat of job loss. Employees can feel their jobs threatened (invoking job insecurity) but concurrently perceive significant personal losses (due to embedding forces) (lost by quitting, including a well-fitting job, at-work friends, and sacrifices [e.g., pension]). While on-the-job embeddedness provides retention-related benefits to organizations, our findings suggest that it can leave employees in a precarious position by feeling “stuck” under a looming threat of involuntary job loss. By doing so, the findings contribute to the emerging research on the “dark side” of job embeddedness or at least illustrate that there can be trade-offs involved for highly on-the-job embedded individuals. Although providing support for our hypotheses, Study 1 does not consider half of the overall job embeddedness construct: being embedded off-the-job in one's community (Mitchell et al., 2001).

## 8 | STUDY 2

In Study 2, we first constructively replicate the conceptual logic of Study 1 in a new sample of full-time employees considering turnover intentions—“a conscious and deliberate willfulness to leave the



**FIGURE 1** Interaction between job insecurity and on-the-job embeddedness predicting job search (Study 1).



organization" (Tett & Meyer, 1993, p. 262)—as the mediator between job insecurity and voluntary turnover that indicates diversion of personal resources to obtaining an alternative. Consistent with Study 1, we draw upon COR theory (Hobfoll, 1989) to suggest that employees seek to protect resources by withdrawing from job insecurity. They can do so by first contemplating to quit their jobs (i.e., turnover intention) (Greenhalgh & Rosenblatt, 1984) and then actually quitting their jobs (i.e., voluntary turnover) (Blau, 2007). In some support, meta-analyses show that job insecurity is positively related with turnover intentions (Jiang & Lavaysse, 2018), and turnover intentions is positively related with turnover (Griffeth et al., 2000).

**Hypothesis 3.** Turnover intention mediates the positive relationship between job insecurity and voluntary turnover.

To elucidate the effects of job insecurity and also having deep resource investments that would be lost upon leaving (feeling "stuck"), we next investigate the interactive effects of on- and off-the-job embeddedness on the positive relationship between job insecurity and turnover intentions. By considering both embeddedness types, we seek to deepen understanding of how these distinct but related forms of embeddedness shape outcomes. While the focus in theory and research has been predominately on on-the-job embeddedness (Jiang et al., 2012; Lee et al., 2014), considering both types of embeddedness is important. For example, the COR perspective of embeddedness (Kiazad et al., 2015) maintains that employees have a different degree of embeddedness in on- and off-the-job domains. This is because they invest and gain resources differently over time in each domain, which corresponds with their different motivations to guard invested and gained domain resources in the future (Halbesleben et al., 2014). Furthermore, a meta-analysis (Jiang et al., 2012) suggests that on- and off-the-job embeddedness should be operationalized as different constructs because they are moderately correlated ( $r_c = .31$ ) and related to different outcomes; the weighted corrected correlations of off-the-job embeddedness with turnover intentions ( $-0.22$ ) and voluntary turnover ( $-0.12$ ) were weaker than on-the-job embeddedness (respectively,  $-0.48$  and  $-0.19$ ). While off-the-job embeddedness can provide retention-related benefits to organizations (Mitchell et al., 2001), its effects may not be strong if people are able to change jobs without relocating (Allen, 2006; Feldman et al., 2012). Research also suggests that on- and off-the-job embeddedness have different moderating effects (Porter et al., 2019; Rubenstein et al., 2020).

Applying the logic used in Study 1, we propose that on-the-job embeddedness moderates the positive relationship between job insecurity and turnover intention such as this relationship is weaker when embeddedness is higher because insecurity threatens valued personal resources. At higher levels of on-the-job embeddedness, employees have more valued work-related resources, and they seek to keep them by staying because these resources are difficult to duplicate outside the present organization (Allen et al., 2016). In a COR-based account

of embeddedness, Kiazad et al. (2015) argued that high on-the-job embeddedness constitutes a valuable resource due to its instrumentality in goal attainment such as income growth and career advancement that make it more difficult for employees to leave their organizations. Further, a COR-based study suggests that on-the-job embeddedness links buffer the negative relationship between aversive workplace events and turnover intentions (Treuren, 2019). Applying the above evidence, we expect that the moderating effect occurs because the more work-related resources employees have accumulated over time, the more embedded they tend to become in their organizations and the more unwilling they are to consider giving up the resources as a strategy if those resources come under threat of loss.

**Hypothesis 4a.** On-the-job embeddedness moderates the indirect relationship between job insecurity and voluntary turnover through turnover intention; in the first-stage mediation, the positive relationship between job insecurity and turnover is weaker when on-the-job embeddedness is high.

We continue by proposing that off-the-job embeddedness (as a global construct) can have opposite interactive effects. Although embeddedness theory states that people accumulate, value, and are embedded to on- and off-the-job domains that have similar effects (Mitchell et al., 2001), COR theory suggests that people can accumulate, value, and are embedded to on- and off-the-job domains in different ways (Hobfoll, 1989). Because of finite resources (Hobfoll, 1989), resource investments in the off-the-job domain leave less resources for on-the-job domain, and vice versa. Thus, people who invest resources more in the off-the-job domain have fewer resources to invest in the off-the-job domain. The point here is that employees can have different degrees of on- and off-the-job embeddedness (Kiazad et al., 2015; Rubenstein et al., 2020) with different interactive effects. Because COR theory further maintains that resources exist in combination or bundles (Hobfoll, 2011), off-the-job embeddedness has been regarded as a cumulative resource that has greater value when bundled than in parts (Sender et al., 2018; Wheeler et al., 2012). Feldman et al. (2012) in turn proposed that off-the-job embeddedness occurs by proxy of various community-related influences. When confronted with resource loss, people might thus use compensatory embedding resources (Hobfoll, 2001) that are in the off-the-job domain.

The COR perspective of embeddedness further suggests that off-the-job links can provide support from community groups, friends, or family members that alleviate the negative effects of job insecurity (Kiazad et al., 2015), and research suggests that off-the-job networks can facilitate finding alternative employment (Porter et al., 2019). For example, employees with higher levels of off-the-job fit tend to have greater access and involvement in community activities (Burrows et al., 2022), which can help by gained resources to reduce the aversive effects of job insecurity. For these reasons, employees experiencing job insecurity who are more embedded off-the-job may be even

more likely to preemptively pursue alternative employment because of these additional resources. Furthermore, a recent study suggests that embeddedness represents differential value and investment placed on embedded domains (Rubenstein et al., 2020). Thus, different from on-the-job embeddedness, there might be little resource cost to employees to electing to divert resources away from the current job toward finding another when they are faced with the threat of job loss. While people perceiving high job insecurity might sometimes have to relocate to another city or region, they often maintain links with their friends and family members in their former communities (Wrzus et al., 2013). Overall, then, we expect higher off-the-job embeddedness to potentially exacerbate the likelihood that those experiencing job insecurity will engage in withdrawal processes resulting in turnover.

**Hypothesis 4b.** Off-the-job embeddedness moderates the indirect relationship between job insecurity and voluntary turnover through turnover intention; in the first-stage mediation, the positive relationship between job insecurity and turnover is stronger when off-the-job embeddedness is high.

## 9 | METHOD

### 9.1 | Sample and procedures

We collected data through a research company with three online surveys at three time-points over 12 months from people employed full-time in various privately owned organizations in Japan. The data were collected from employees who did not participate in Study 1. At Time 1, by surveys sent to 1106 people fulfilling our screening criteria, we measured job insecurity and control variables (785 respondents: 71% response rate). At Time 2 (3 months after Time 1), we measured on- and off-the-job embeddedness (596 respondents: 76% response rate). At Time 3 (12 months after Time 1), we measured voluntary turnover (540 respondents: 91% response rate). We used identification numbers given by the research company to link these three surveys.

In line with Study 1, our time lags were guided by scholarly recommendations, prior research, and context-related reasons. The time lag between Time 1 and Time 2 was chosen in line with prior research on aversive workplace events and job embeddedness (e.g., Allen et al., 2016; Peltokorpi et al., 2022) and to minimize attrition between Time 1 and Time 2 surveys (e.g., Huang et al., 2012; Shoss et al., 2022). The time lag with voluntary turnover is shorter than in Study 1 but in line with research on voluntary turnover (Rubenstein et al., 2018) and scholarly recommendations (Hom et al., 2012). In Japan, research on voluntary turnover has used time lags between 12 months (e.g., Allen et al., 2016) and 4 years (e.g., Kachi et al., 2020).

We listwise deleted those people who did not answer to all surveys and three people who left their organizations for involuntary reasons. The final sample size was 516 people. We compared those employees who participated in all surveys with those employees who did not by

using age, gender, job insecurity, on-the-job embeddedness, and voluntary-involuntary data but we did not find any significant differences. The average age of respondents was 37 years (76% male). They were employed in organizations from various industries, including service (34%), manufacturing (26%), transport and communication (16%), retail (10%), finance and insurance (7%), construction (3%), and others (4%).

### 9.2 | Measures

Unless otherwise stated, we used 7-point (1 = *strongly disagree*, 7 = *strongly agree*) Likert-type scales to measure all items. We assessed job insecurity using a three-item scale by Hellgren et al. (1999). A sample item is “I am worried about having to leave my job before I would like to” ( $\alpha = .70$ ). Turnover intention was assessed by a three-item scale from Mitchell et al. (2001). A sample item is “I intend to leave the company in the next 12 months” ( $\alpha = .97$ ). We assessed on-the-job embeddedness ( $\alpha = .79$ ) with the same instructions and measure as in Study 1, and off-the-job embeddedness by a five-item scale from Ng and Feldman (2012). In instructions, we asked the respondents to focus only on off-job-related aspects. A sample item is “I am tightly connected to this community” ( $\alpha = .87$ ). We controlled for respondents' gender, tenure, age, education level, and job alternatives. We assessed job alternatives by a three-item scale from Crossley et al. (2007). A sample item is “It would be easy for me to find another job that pays as well as my present job” ( $\alpha = .86$ ).

## 10 | RESULTS

The CFA of our five-factor model—job insecurity, turnover intention, on-the-job embeddedness, off-the-job embeddedness, and job alternatives—provided an acceptable fit with the data;  $\chi^2 = 795.79_{(197)}$ ,  $p < .001$ ; CFI = 0.92; TLI = 0.90; RMSEA = 0.07 (Hu & Bentler, 1999). A comparison of the five-factor model with alternative models provided a worse fit with the data. Table 3 provides descriptive statistics and correlations.

We used mean-centered to test our hypotheses with STATA Version 14 and PROCESS macro Version 23 (Hayes, 2013) with SPSS version 23 with 5000 bias-corrected bootstrapped samples. See Table 4 for results.

Hypothesis 3 predicted turnover intention to mediate the positive relationship between job insecurity and voluntary turnover. In Table 4, job insecurity was positive related to turnover intention ( $B = .25$ ,  $p = .001$ ; 95% CI [0.11, 0.40]) and voluntary turnover ( $B = .71$ ,  $p = .003$ ; 95% CI [0.23, 1.18]) and turnover intention positively related to voluntary turnover ( $B = .48$ ,  $p = .000$ ; 95% CI [0.26, 0.72]). Further, the odds ratios for job insecurity and turnover intention, respectively, showed that it is 2.03 and 1.64 times more likely that a person quits if job insecurity and turnover intention increase by one unit. Because the indirect effect through turnover intention was also significant ( $B = .03$ , 95% CI [0.00, 0.10]), the results support Hypothesis 3.

**TABLE 3** Descriptive statistics and intercorrelations (Study 2).

| Variable                    | M     | SD    | 1     | 2     | 3      | 4     | 5      | 6     | 7      | 8      | 9     |
|-----------------------------|-------|-------|-------|-------|--------|-------|--------|-------|--------|--------|-------|
| 1. Gender                   | 0.76  | 0.35  |       |       |        |       |        |       |        |        |       |
| 2. Age                      | 37.06 | 7.42  | .22** |       |        |       |        |       |        |        |       |
| 3. Tenure                   | 7.14  | 10.42 | .17** | .48** |        |       |        |       |        |        |       |
| 4. Education level          | 3.90  | 0.79  | -.09* | -.05  | -.15** |       |        |       |        |        |       |
| 5. Job alternatives         | 4.01  | 1.09  | .03   | -.05  | -.17** | .16** |        |       |        |        |       |
| 6. Job insecurity           | 4.26  | 1.06  | -.02  | -.03  | -.02   | -.05  | -.43** |       |        |        |       |
| 7. On-the-job embeddedness  | 3.98  | 1.04  | .07   | .10*  | .23**  | -.07  | -.06   | -.09* |        |        |       |
| 8. Off-the-job embeddedness | 3.68  | 1.27  | .06   | .01   | .05    | -.10* | -.00   | .06   | .33**  |        |       |
| 9. Turnover intention       | 2.70  | 1.72  | -.06  | -.03  | -.19** | .09   | .15**  | .11*  | -.42** | -.12** |       |
| 10. Voluntary turnover      | 0.05  | 0.23  | .02   | .02   | -.07   | .08   | .11*   | .09*  | -.11** | -.01   | .28** |

Note: N = 516. Gender (female = 0, male = 1); education level (1 = middle school, 2 = high school, 3 = vocational school/two-year university, 4 = Bachelor's degree, 5 = Master's/PhD). \* $p < .05$ , and \*\* $p < .01$ .

Hypothesis 4a predicted on-the-job embeddedness to moderate the indirect relationship between job insecurity and turnover through turnover intention; in the first-stage mediation the positive relationship between job insecurity and turnover intention is weaker when on-the-job embeddedness is high. In Table 4, the interaction term was significant ( $B = -.13, p = .038; 95\% \text{ CI } [-0.28, -0.01]$ ). In Figure 2, the relationship between job insecurity and turnover intention was weaker when on-the-job embeddedness is high. The Johnson-Neyman results of 95% region of significance showed that the conditional effects of on-the-job embeddedness are significant for values less than 3.39. The indirect effect of job insecurity on turnover through turnover intention was weaker when on-the-job embeddedness is high ( $B = .03, 95\% \text{ CI } [-0.03, 0.11]$ ) and stronger when on-the-job embeddedness is low ( $B = .10, 95\% \text{ CI } [0.02, 0.22]$ ). Because the index of moderated mediation was also significant ( $B = -.09, 95\% \text{ CI } [-0.20, -0.02]$ ), the results support Hypothesis 4a.

Hypothesis 4b predicted off-the-job embeddedness to moderate the indirect relationship between job insecurity and turnover through turnover intention; in the first-stage mediation, the positive relationship between job insecurity and turnover intention is stronger when off-the-job embeddedness is high. In Table 4, the interaction term is significant ( $B = .14, p = .033; 95\% \text{ CI } [0.01, 0.26]$ ). In Figure 3, the relationship between job insecurity and turnover intention was also stronger when off-the-job embeddedness is high. The Johnson-Neyman results of 95% region of significance showed that the conditional effects of on-the-job embeddedness are significant for values between 2.65 and 4.67. The indirect effect of job insecurity on turnover through turnover intention was weaker when off-the-job embeddedness is low ( $B = .04, 95\% \text{ CI } [-0.01, 0.12]$ ) and stronger when off-the-job embeddedness is high ( $B = .08, 95\% \text{ CI } [0.01, 0.20]$ ). Because the index of moderated mediation was also significant ( $B = -.07, 95\% \text{ CI } [0.01, 0.08]$ ), the results support Hypothesis 4b.

We tested Hypotheses 3–4b with identical analyses as above without control variables. The results were similar. Hypothesis 3: Job insecurity was positive related to turnover intention ( $B = .26, p = .000; 95\% \text{ CI } [0.12, 0.41]$ ) and voluntary turnover ( $B = .65, p = .006; 95\% \text{ CI } [0.18, 1.11]$ ) and turnover intention positively related to voluntary turnover ( $B = .47, p = .000; 95\% \text{ CI } [0.25, 0.94]$ ). The indirect effect through job search was also significant ( $B = .10, 95\% \text{ CI } [0.02, 0.21]$ ). Hypothesis 4a: the interaction term was significant ( $B = -.14, p = .034; 95\% \text{ CI } [-0.28, -0.01]$ ). Hypothesis 4b: the interaction term was significant ( $B = .12, p = .043; 95\% \text{ CI } [0.01, 0.25]$ ).

## 11 | STUDY 2: DISCUSSION

Study 2 constructively replicated the findings from Study 1 by showing that turnover intention mediates the positive relationship between job insecurity and voluntary turnover and that on- and off-the-job embeddedness moderate the relationship between job insecurity and turnover intentions. Supporting our COR-based conceptualization, Study 2 findings suggest that while employees higher in on-the-job embeddedness were less likely to contemplate quitting in response to

TABLE 4 Regression analyses (Study 2).

| Turnover intention                                       | B        | $\beta$                   | SE        | t                    | p           | LLCI     | ULCI        |             |
|--|----------|---------------------------|-----------|----------------------|-------------|----------|-------------|-------------|
| Gender   | -.18     | -.04                      | 0.19      | -0.90                | .369        | -0.56    | 0.21        |             |
| Age  | .01      | .04                       | 0.01      | 0.98                 | .327        | -0.01    | 0.03        |             |
| Tenure   | -.01     | -.08                      | 0.01      | -1.79                | .073        | -0.03    | 0.00        |             |
| Education level  | .09      | .04                       | 0.09      | 1.01                 | .312        | -0.08    | 0.26        |             |
| Job alternatives   | .29      | .18                       | 0.07      | 4.05                 | .000        | 0.15     | 0.43        |             |
| Job insecurity   | .25      | .15                       | 0.07      | 3.41                 | .001        | 0.11     | 0.40        |             |
| On-the-job embeddedness                                  | -.73     | -.42                      | 0.07      | -9.92                | .000        | -0.87    | -0.58       |             |
| Off-the-job embeddedness                                 | .12      | .07                       | 0.07      | 1.78                 | .075        | -0.01    | 0.26        |             |
| Job insecurity $\times$ on-the-job embeddedness          | -.13     | -.09                      | 0.06      | -2.08                | .038        | -0.28    | -0.01       |             |
| Job insecurity $\times$ off-the-job embeddedness         | .14      | .09                       | 0.06      | 2.13                 | .033        | 0.01     | 0.26        |             |
| R  |          |                           |           | 0.49                 |             |          |             |             |
| R <sup>2</sup>   |          |                           |           | 0.24                 |             |          |             |             |
| F  |          |                           |           | 16.33                |             |          |             |             |
| Conditional effect at levels of on-the-job embeddedness  |          |                           |           |                      |             |          |             |             |
| -1 SD  | .20      | .12                       | 0.09      | 3.41                 | .001        | 0.08     | 0.32        |             |
| M  | .13      | .08                       | 0.05      | 2.61                 | .009        | 0.03     | 0.23        |             |
| +1 SD  | .06      | .04                       | 0.07      | 0.85                 | .398        | -0.08    | 0.20        |             |
| Conditional effect at levels of off-the-job embeddedness |          |                           |           |                      |             |          |             |             |
| -1 SD  | .10      | .06                       | 0.06      | 1.61                 | .108        | -0.02    | 0.22        |             |
| M  | .15      | .09                       | 0.05      | 3.06                 | .002        | 0.05     | 0.25        |             |
| +1 SD  | .21      | .13                       | 0.06      | 3.14                 | .001        | 0.08     | 0.33        |             |
| <b>Voluntary turnover</b>                                | <b>B</b> | <b><math>\beta</math></b> | <b>SE</b> | <b>Z</b>             | <b>Odds</b> | <b>p</b> | <b>LLCI</b> | <b>ULCI</b> |
| Gender   | 1.03     | .16                       | 0.81      | 1.27                 | 2.82        | .204     | -0.56       | 2.64        |
| Age  | .01      | .04                       | 0.03      | .36                  | 1.01        | .719     | -0.05       | 0.08        |
| Tenure   | .01      | .01                       | 0.02      | .09                  | 1.00        | .925     | -0.04       | 0.05        |
| Education level  | .71      | .24                       | 0.34      | 2.05                 | 2.04        | .041     | 0.03        | 1.39        |
| Job alternatives   | .49      | .23                       | 0.22      | 2.17                 | 1.63        | .030     | 0.05        | 0.93        |
| Job insecurity   | .71      | .33                       | 0.24      | 2.93                 | 2.03        | .003     | 0.23        | 1.18        |
| Turnover intention                                       | .48      | .37                       | 0.12      | 4.25                 | 1.64        | .000     | 0.26        | 0.72        |
| Model $\chi^2_{(df)}$                                    |          |                           |           | 43.20 <sub>(7)</sub> |             | .000     |             |             |
| Log likelihood   |          |                           |           | -81.42               |             |          |             |             |
| Pseudo R <sup>2</sup>                                    |          |                           |           | 0.21                 |             |          |             |             |

Note: N = 516. B = unstandardized coefficient;  $\beta$  = standardized coefficient; SE = standard error; CI = confidence interval; LL = lower limit; UL = upper limit.

feeling insecure, those higher in off-the-job embeddedness were more likely to do so. This suggests that off-the-job (community) embeddedness resources also moderate the effects of feeling insecure, in our theorizing by providing alternative resource caravans that make leaving a more realistic alternative.

## 12 | GENERAL DISCUSSION

Two important theoretical contributions to the understanding of voluntary turnover are the ideas that employees become embedded in a web or net of restraining forces on- and off-the-job (Mitchell

et al., 2001), and that employees experience varying degrees of control and desire with respect to leaving (i.e., quitting) that cross to yield proximal withdrawal states that explain motivations to stay or leave from an organization (Hom et al., 2012). The present study builds and extends these foundations in contributing to conversations regarding the increasingly important issue of job insecurity. Specifically, our study makes three contributions to the literature.

First, this study extends research on job insecurity by conceptualizing and empirically demonstrating that job insecurity through job search and turnover intention is positively related with voluntary turnover. Prior research has shown that job insecurity is positively related with turnover intentions (De Witte, 1999; Jiang & Lavaysse, 2018),

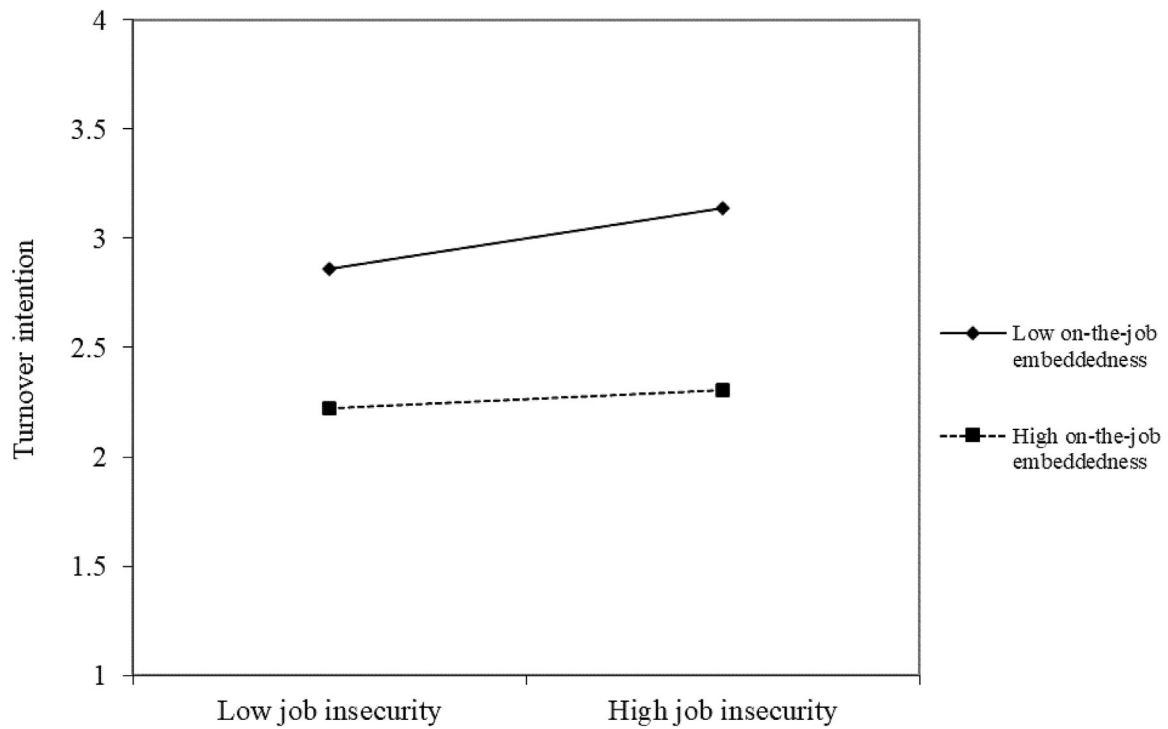


FIGURE 2 Interaction between job insecurity and on-the-job embeddedness predicting turnover intention (Study 2).

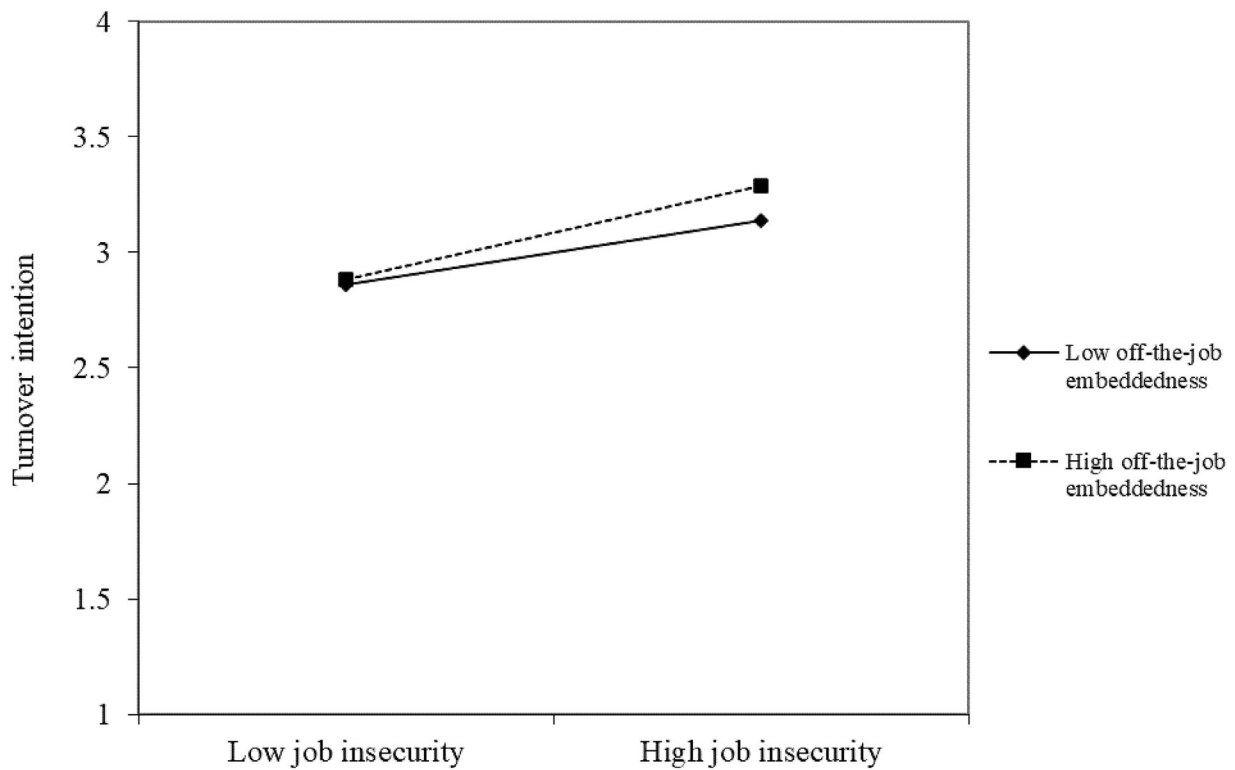


FIGURE 3 Interaction between job insecurity and off-the-job embeddedness predicting turnover intention (Study 2).

but the relationship between job insecurity and actual voluntary turnover is less examined and understood. Instead of linking job insecurity to voluntary turnover, researchers have often used turnover

intentions as a proxy for turnover by suggesting that intentions are accurate predictors of turnover behavior (e.g., Huang et al., 2017). However, meta-analyses suggest that many people who intend to

leave actually stay in their organizations (Griffeth et al., 2000; Hom & Griffeth, 1995), and scholars have cautioned against using turnover intentions as proxies for turnover behavior (i.e., voluntary turnover) (e.g., Allen et al., 2005; Rubenstein et al., 2018). By shifting the focus from intentions to behaviors, this paper contributes to nascent research that links job insecurity to voluntary turnover (Blau, 2007; Richter et al., 2020). Interestingly, in both samples, job insecurity demonstrated a significant positive direct effect on voluntary turnover in addition to the hypothesized indirect effects. This suggests that for some employees the perceived threat of job loss is enough to initiate turnover decisions that short-circuit the typical turnover process (e.g., impulsive leavers from an unfolding model perspective). This study also adds to research that links job embeddedness and job insecurity. Despite the accumulating research (e.g., Jiang & Lavaysse, 2018; Lee et al., 2014), relatively little is known about the moderating effects of job embeddedness between job insecurity and its proximal and distal outcomes.

Second, the findings contribute to theory and research on job embeddedness. To date, scholars have emphasized primarily the positive effects of embeddedness on organizations and employees (Jiang et al., 2012; Lee et al., 2014). In particular, theory and research have focused on how on-the-job embeddedness reduces turnover intention and voluntary turnover. However, scholars have started to pay attention to the “dark side” of job embeddedness (e.g., Allen et al., 2016; Ng & Feldman, 2012). Contributing to this emerging body of research, Study 1 findings suggest that employees high in on-the-job embeddedness are less likely to search for jobs even when they perceive job insecurity. In a related vein, Study 2 findings suggest that employees high in on-the-job embeddedness are less likely to contemplate leaving (i.e., turnover intention) even when they perceive job insecurity. From the COR perspective, these findings suggest that employees make choices between job insecurity and on-the-job embeddedness after weighting the resource profiles that are most harmful to them. Our studies provide consistent evidence that employees tend to value on-the-job embeddedness over job insecurity. Considering that theory and research have focused mainly on the benefits of embeddedness (Lee et al., 2014), we hope that future research continues to examine this “dark side” of embeddedness.

Third, while theory and research has focused mainly on-the-job embeddedness (Lee et al., 2014), the findings of Study 2 suggest that on- and off-the-job embeddedness dimensions are valuable in tandem but should also be distinguished. Specifically, we examined how on- and off-the-job embeddedness affects “nervous stayers” who also perceive job insecurity. Suggesting the importance of buffering effects on community-based resources (Burrows et al., 2022; Feldman et al., 2012), off-the-job embeddedness had opposite moderating effects on turnover intention. We reasoned that community-based resources may provide social support and information-related benefits to individuals experiencing job insecurity. At the same time, we maintain that why off-the-job embeddedness moderates the relationship between job insecurity and turnover intention would benefit from further conceptual and empirical development. For example, future

works can provide more fine-grained conceptualizations and empirical studies on how on- and off-the-job embeddedness alleviate or facilitate the relationships between job insecurity and outcomes. Furthermore, while off-the-job embeddedness has primarily been conceptualized and assessed through links, fit, and sacrifices, one additional dimension to be considered is financial security. In the present paper, it could influence whether employees are willing and able to quit their organizations.

## 12.1 | Practical implications

The findings provide practical implications by suggesting that high on-the-job job embeddedness can help organizations to retain employees that perceive job insecurity. This is beneficial considering that voluntary turnover is costly for organizations partly because the most valuable employees tend to quit first (Greenhalgh & Rosenblatt, 1984). While organizations can retain employees better by embedding them in organizations, employees with high job insecurity may be refraining from seeking jobs because they feel “stuck” in their organizations. Thus, organizations can also make efforts to help employees more effectively cope with job insecurity. For example, organizations can seek to foster high-quality leader-member exchange by building the supervisor–subordinate relationships based on mutual obligation and trust. Interestingly, our findings also suggest the importance of buffering effects of off-the-job or community resources. While organizations can do relatively less on this matter, employees facing job insecurity are advised to make better use of available off-the-job resources such as help from friends and family members. As suggested by Feldman et al. (2012), employees may also seek to embed themselves in the off-the-job domain to generate additional resources that help them to cope better with work-related aversive effects.

## 12.2 | Limitations and suggestions for future research

Our study has limitations that can provide avenues for future research. First, we used self-reports to collect our data that might raise concerns of common method bias. Arguably, there was no better way to measure most measures in our studies. For example, job embeddedness and job insecurity are subjective measures. Indeed, job insecurity has been theorized and operationalized as a subjective construct that is “in the eyes of the beholder” (Greenhalgh & Rosenblatt, 1984, p. 438). Nevertheless, more objective measures can be used in future research. We also used global constructs to measure on- and off-the-job embeddedness. Although increasingly used in research, this approach might conceal information on specific link, fit, and sacrifice-related embeddedness dimensions. For example, family embeddedness (Ramesh & Gelfand, 2010) may have different moderating effects than the global (Crossley et al., 2007) and composite

constructs (Mitchell et al., 2001) of job embeddedness. Thus, more specific measures of embeddedness can be used in future research. We also relied on self-reports of whether turnover was voluntary or involuntary, which might be subject to respondent biases (although we did not find significant differences for those reporting voluntary and involuntary terminations).

A related measurement issue is that we were unable to tease out possible changes and reciprocal relationships among job insecurity and embeddedness over time. For example, it is plausible that feeling of job insecurity over time can lead employees to feel less embedded at work (and these constructs were moderately significantly correlated [Study 1 (−.26), Study 2 (−.09)]), and/or that extreme perceptions of embeddedness can prevent any real feelings of job insecurity from taking root. These possibilities present additional opportunities for future research examining the interplay of resource reservoirs and threats. For example, if very high embeddedness prevents employees from accurately perceiving threats of job loss, could those employees be more likely to be “blindsided” by a layoff resulting in more extreme reactions? Because job insecurity and embeddedness are likely to change over time, longitudinal research approaches can also be used in future research.

Additionally, the findings of our studies can be context specific because we conducted them in Japan. Human resource management practices used in Japanese organizations such as college recruiting and seniority-based promotion and compensation systems might potentially increase on-the-job embeddedness in Japanese organizations (Peltokorpi, 2013). At the same time, employees around the world are reported to experience job insecurity (Jiang & Lavaysse, 2018), and prior research suggests that employees in Japan (Peltokorpi et al., 2015), the USA (Allen et al., 2016), and other countries (Allen et al., 2014) experience similar levels of on-the-job embeddedness. However, future research is recommended to examine the hypothesized relations in other countries.

We also acknowledge that there are multiple potential responses to job insecurity that we did not assess. As explained above, there remained a direct relationship between job insecurity and voluntary turnover, suggesting there could be differences in how methodically versus impulsively employees respond to the threat of job loss. In addition to job search and turnover intentions, a range of other constructs may mediate the relationship between job insecurity and voluntary turnover. For example, research suggests that employees may react to perceived job insecurity by working harder to keep their jobs and distancing themselves from their work in terms of absenteeism (De Witte et al., 2015; Jiang & Lavaysse, 2018). Similarly, we elected to focus on job embeddedness to capture many of the forces we suggest moderate the likelihood of diverting resources toward finding alternative employment as a response to job insecurity. There might be value in identifying specific similar mechanisms that could provide additional nuance such as social support and relocation. As such, we encourage future research to more comprehensively assess the complex associations among job insecurity, embeddedness, and voluntary turnover.

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## DATA AVAILABILITY STATEMENT

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

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