When "Embedded" Means "Stuck": Moderating Effects of Job Embeddedness in Adverse

Work Environments

David G. Allen*

School of Management & Labor Relations

Rutgers University

&

Warwick Business School

Piscataway, NJ 08854

david.allen@rutgers.edu

848.445.1350

Vesa Peltokorpi*

Saitama University

Saitama Prefecture, Japan

pelkotorpi@yahoo.com

Alex L. Rubenstein*

Fogelman College of Business & Economics

University of Memphis

Memphis, TN 38152

rbnstein@memphis.edu

Running Head: ADVERSE EFFECTS OF JOB EMBEDDEDNESS

When "Embedded" Means "Stuck": Moderating Effects of Job Embeddedness in Adverse

Work Environments

Abstract

Job embeddedness is predominately assumed to benefit employees, work groups, and organizations (e.g., higher performance, social cohesion, and lower voluntary turnover). Challenging this assumption, we examined the potentially negative outcomes that may occur if employees are embedded in an adverse work environment - feeling "stuck", yet unable to exit a negative situation. More specifically, we considered two factors representing adverse work conditions: abusive supervision and job insecurity. Drawing from conservation-of-resources theory, we hypothesized that job embeddedness would moderate the relationship between these conditions and outcomes of voluntary turnover, physical health, emotional exhaustion, and sleep quality/quantity, such that employees embedded in more adverse environments would be less likely to quit, but would experience more negative personal outcomes. Results from two independent samples, one in Japan (*N*=597) and one in the United States (*N*=283), provide support for the hypothesized pattern of interaction effects, thereby highlighting a largely neglected "dark side" of job embeddedness.

Keywords: Job embeddedness; abusive supervision; physical health symptoms; employee retention

When "Embedded" Means "Stuck": Moderating Effects of Job Embeddedness in Adverse Work Environments

"I ain't gonna quit!"

Richard Gere as Ensign Mayo (An Officer and a Gentleman)

In a pivotal scene in the movie An Officer and a Gentleman (Paramount Pictures, 1982), Ensign Zack Mayo is repeatedly abused by his supervisor, drill instructor Gunnery Sergeant Emil Foley. Foley forces Mayo to perform excessive physical exercise, coupled with various forms of verbal harassment (e.g., berating Mayo's character; insulting Mayo's father) and distress (e.g., push-ups face down into a mud puddle; calisthenics while being struck in the face by a stream from a water hose), ultimately screaming at Mayo that he should give up and quit. However, Mayo refuses to quit. He has made significant investments and built meaningful relationships that would be sacrificed if he left, and believes he has little choice but to endure the abuse.

While an extreme example of abusive supervision, this scene illustrates a unique perspective as to the joint nature of unfavorable work conditions along with being "stuck" or "embedded" in a particular context. We know that employees regularly experience work conditions that, while not as extreme as those facing Ensign Mayo, include abusive supervision, bullying, threats, harassment, job insecurity, and other forms of distress (e.g., Duffy, Ganster, & Pagon, 2002; Martinko, Harvey, Brees, & Mackey, 2013). Although aversive work conditions such as abusive supervision are related to outcomes such as withdrawal, many employees who experience such difficulties choose to stay rather than leave their jobs. We suggest this is at least partially attributable to employee job embeddedness, defined as "the combined forces that keep a person from leaving his or her job" (Yao, Lee, Mitchell, Burton, & Sablynski, 2004, p. 159). Job

embeddedness has gained increased attention as a means to understand employee stay or leave decisions (Lee, Burch, & Mitchell, 2014). A sizable body of research has accumulated, relating embedding forces to numerous important individual, group, and organizational outcomes, most notably generally favorable criteria such as lower voluntary turnover (Mitchell, Holtom, Lee, Sablynski, & Erez, 2001), greater in- and extra-role performance (Lee, Mitchell, Sablynski, Burton, & Holtom, 2004), and improved attitudes (Jiang, Liu, McKay, Lee, & Mitchell, 2012). There is also evidence that being embedded can buffer the effects of negative workplace shocks on task and citizenship behaviors (Burton, Holtom, Sablynski, Mitchell, & Lee, 2010) and job search (Holtom, Burton, and Crossley, 2012).

At first blush, these empirical findings suggest that greater embeddedness is something that organizations should strategically encourage (Hom, Tsui, Lee, Ping, Wu, & Zhang, 2009; Mitchell et al., 2001), and perhaps even something employees would themselves seek to cultivate. However, though being embedded may have buffering effects that prevent negative workplace events from evolving into quitting behavior, being stuck in an unfavorable work environment could also have potentially negative consequences for employees. Even though unfavorable conditions such as abusive supervision may be associated with thoughts of leaving, many employees who experience such negative conditions do not quit. One reason for this may be, in contemporary turnover parlance, that some employees are so embedded that they will not or cannot leave, despite adverse work experiences or treatment (Mitchell et al., 2001).

By definition, being embedded describes a certain degree of "stuckness" or "inertia" - a sense of feeling enmeshed in "a net or a web" from which it is difficult for one to separate (Mitchell et al., 2001, p. 1104). We think the "stuckness" aspect of embeddedness has been largely overlooked in theory and research. What if an employee is embedded in an abusive or

toxic social environment, like Ensign Mayo? What if an employee's skills are a perfect match to the idiosyncratic practices of a company, but s/he experiences constant fear of being laid off? What if an employee would like to leave for a better career opportunity, but certain sacrifices s/he would give up (e.g., retirement benefits vesting, a convenient commute, interesting projects, on-site job amenities) constrain such action? Notably, Lee et al. reflected in their review of a decade of embeddedness research, there remains a "need to better understand the potentially bad things stemming from job embeddedness" (2014, p. 209).

We extend theory by emphasizing the "dark side" of job embeddedness and its potentially negative outcomes. Other scholars have begun to raise similar concerns. For example, Holtom et al. (2012) mentioned a possible dark side whereby being disgruntled but stuck could lead to reduced performance or increased deviance. Hom, Mitchell, Lee, and Griffeth (2012) also considered the potentially dysfunctional ramifications for organizations of "reluctant stayers" (i.e., individuals who desire to leave an organization but cannot). Ng and Feldman (2012) found positive relationships between embeddedness and work-to-family and family-to-work conflict, while Tepper (2000) showed that employees subject to abusive supervision but with few perceived job alternatives (a separate but related concept to job embeddedness; Mitchell et al., [2001]) were more likely to experience depressive symptoms and were less satisfied. At the same time, meta-analytic findings suggest employees exposed to hostile workplaces (e.g., unfair treatment, high job insecurity) are more likely to experience deteriorated physical and mental health, and even higher mortality rates (Goh, Pfeffer, & Zenios, 2016). We expect that these two qualities in combination - high embeddedness, along with an adverse work environment - interact to produce especially potent negative outcomes for *employees*, because they cannot easily remove themselves from the negative situation (e.g., by quitting).

We explore this phenomenon in two studies. In Study 1, we use an employee sample from Japan to test whether increased embeddedness reduces the likelihood that aversive work conditions (in terms of abusive supervision) translate into voluntary turnover, while also examining whether the interaction between a negative work environment and embeddedness predicts negative physical health symptoms. In Study 2, we use an employee sample from the United States to test how embeddedness interacts with a broader set of adverse work conditions (abusive supervision, job insecurity) to affect other negative outcomes (emotional exhaustion, sleep quantity/quality). With two independent samples, we seek to replicate an interaction pattern by which embeddedness exacerbates relationships between aversive environments and individual outcomes, and show that such effects operate in different cultural contexts.

We contribute to theory by challenging the predominant assumption that greater job embeddedness is altogether advantageous. We hope to shift the current consensus by showing when and how embeddedness can have a "dark side" if employees are faced with aversive work conditions but feel stuck. We expand the nomological network of job embeddedness by emphasizing its role as a moderator and testing under-explored consequences, such as physical health symptoms, emotional exhaustion, and sleep quantity/quality. We also contribute to recent theorizing extending the rationale for how and why embeddedness motivates and constrains behavior by emphasizing resource conservation (Kiazad, Holtom, Hom, & Newman, 2015). That is, embeddedness can help explain why employees remain in the face of abuse and other aversive conditions, because they strive to retain and protect valued resources. We also contribute to theory by demonstrating the role of embeddedness in Eastern as well as Western cultures, an important distinction given cultural differences in how employees form and interpret

organizational attachment and how embeddedness operates across cultures (Jiang et al., 2012;

Peltokorpi, Allen, & Froese, 2015; Ramesh & Gelfand, 2010).

Job Embeddedness

Traditional turnover theories (e.g., March & Simon, 1958; Mobley, 1977) maintain that

voluntary turnover is more likely if employees are dissatisfied or otherwise unhappy in their

jobs, and believe they can obtain attractive alternatives elsewhere. These theories predominately

focus on affectively-charged reasons for quitting, such as low job satisfaction or organizational

commitment, and unfair treatment (Holtom, Mitchell, Lee, & Eberly, 2008). Disappointed by the

relatively low predictive power of such models, Mitchell et al. (2001) proposed a shift in

turnover theorizing away from why employees leave and toward better understanding why they

stay (Zhang, Fried, & Griffeth, 2012).

Since the introduction of the job embeddedness concept (Mitchell et al., 2001), scholars

have reconsidered the nature of voluntary turnover - the "voluntary cessation of membership in

an organization by an individual who receives monetary compensation for participation in that

organization" (Hom & Griffeth, 1995, p. 5), finding that the reasons why people stay at a job are

often wholly different than the reasons why people leave. That is, the reasons for leaving are not

merely the opposite as those for staying, but involve a separate set of "push" or "pull" factors

(Lee & Mitchell, 1994; Mitchell & Lee, 2001). Many of these reasons have little to do with

affect or attitudes, but reside in individuals' idiosyncratic attachments to their surroundings. The

concept of job embeddedness is grounded in field theory (Lewin, 1951) and research on

embedded figures (Mitchell & Lee, 2001): embeddedness exists as a compilation of forces

enmeshing individuals into a psychological field or life space summarizing a variety of

environmental, psychological, and social forces. These forces interdependently influence (i.e.,

constrain) decision-making. In a similar way, embedded figures are immersed in their background, attached or linked in various ways with their surroundings.

Job embeddedness consists of three on- and off-the-job dimensions: links, fit, and sacrifice, which operate as causal indicators of one's aggregate level of embeddedness (Mitchell et al., 2001). *Links* refer to one's formal or informal ties to institutions or other people (e.g., coworkers on one's work team; relatives or social groups in one's community). *Fit* refers to one's perceived compatibility with their work and community (e.g., believing one's values, skills, and preferences match with what an organization requires or with what their community offers). *Sacrifice* refers to the perceived psychological, social, or material costs of leaving one's organization and/or community (e.g., compensation, benefits, and other perks; positive community qualities, such as neighborhood safety). To the degree one experiences greater levels of any or all of these dimensions, the further s/he becomes embedded in an environmental field, and subsequently, the stronger are the forces which restrain movement out (Mitchell et al., 2001).

We focus on on-the-job, or organizational embeddedness, rather than off-the-job, or community embeddedness, because we are interested to understand what happens when an employee is "stuck" in a negative work environment. Further, since research shows that on-the-job embeddedness plays a larger role in job withdrawal attitudes and decisions than does off-the-job embeddedness (Allen, 2006; Jiang et al., 2012), we believe that organizational embeddedness better captures the effects of adverse work conditions (Zhang et al., 2012). Of course, it is possible that community embeddedness could also restrain leaving in the face of abusive supervision, a point we return to in the Discussion section. In line with previous research (e.g., Ng & Feldman, 2010, Peltokorpi et al., 2015), we use the terms "job embeddedness" and

"organizational embeddedness" synonymously in this paper, because most employees who are embedded in their jobs are also embedded in their organizations (Ng & Feldman, 2010).

Our intention is to shift the consensus in the embeddedness literature away from its positive pole towards its negative pole (Hollenbeck, 2008). We seek to accomplish this by exploring conditions under which embeddedness has detrimental effects on employees. Since the introduction of the job embeddedness concept, the theoretical deck has largely been stacked in favor of its beneficial effects, focusing mainly on its relationship to decreased turnover, as well as increased citizenship behaviors and in-role performance (Lee et al., 2004). However, while ostensibly imbued with positive qualities (e.g., more links, higher fit), job embeddedness at its core is substantively a non-affective construct – a contextual characteristic that carries no inherent positive or negative valence (Mitchell et al., 2001; Johns, 2006). For example, Mitchell et al.'s (2001) original job embeddedness measure focuses on links only in terms of quantity (e.g., "How many coworkers are highly dependent on you?"), rather than quality (Zhang et al., 2012). In a similar manner, Crossley, Bennett, Jex, and Burnfield's (2007) global embeddedness measure focuses on degree of attachment or ties to an organization, but makes no distinction as to whether one is embedded in a desirable or undesirable environment. The essential point is that being embedded is inherently neither good nor bad; however, the characteristics of one's work environment can make it so. Our focus is to examine what happens when employees are embedded in an adverse work environment.

Our perspective is related to but distinct from at least two other research streams. One is a growing literature considering possible downsides of being embedded or stuck. Holtom et al. (2012) raised the possibility that embeddedness could have a dark side in that disgruntled but stuck employees could exhibit lower performance and/or more counterproductive work

behaviors. Hom et al. (2012), in turn, described reluctant stayers as individuals who prefer to leave their organization but cannot, and trapped reluctant stayers as individuals whose mobility is constrained by normative influences or sacrifices that would be lost upon exit. Hom et al. (2012) offer a range of expected dysfunctional organizational outcomes associated with feeling trapped, such as absence, lateness, deviance, and low performance. Individuals experiencing adverse work conditions who are nevertheless embedded may be an interesting example of trapped reluctant stayers, a group whom Hom et al. (2012) suggest have eluded scholarship to this point. However, these perspectives on the dark side of being stuck focus on outcomes largely of direct interest to organizations, whereas our focus is more directly on employee well-being.

The other related stream is commitment research, particularly the idea that continuance and normative commitment can sometimes be dysfunctional, due to similar feelings of being stuck. Mitchell et al. (2001) acknowledged that the sacrifice element of embeddedness is similar to continuance commitment, while links sometimes connote normative obligations. However, they take pains to differentiate embeddedness conceptually and empirically from commitment. Perhaps more relevant to our arguments is research on commitment configurations or profiles. This work suggests that configurations of affective, normative, and continuance commitment create commitment profiles that predict outcomes (Meyer & Herscovitch, 2001). For example, Sinclair, Tucker, Cullen, and Wright (2005) called employees with profiles of strong continuance and weak affective commitment "trapped". Wasti (2005) found that a continuance commitment dominant cluster (i.e., with average affective and normative, but high continuance commitment) reported higher stress, while in another sample the continuance commitment dominant cluster as well as a normative-continuance dominant cluster (with low affective, but average or higher normative and continuance commitment) reported the worst outcomes. Our theorizing may be

analogous in that we imagine an employee stuck in aversive work conditions may be likely to experience lower affective commitment (because of the abuse), but higher continuance (because of embedding sacrifices) and normative (because of links) commitment. However, Hom et al. (2012) make a key distinction between these continuance commitment dominant profiles and reluctant stayers: although both feel stuck, the former are theoretically agnostic about wanting to leave, while the latter by definition prefer to leave. In our case, we focus on aversive conditions, such as abusive supervision, that would presumably drive a desire to exit the situation.

Study 1

In Study 1, we focus on the role of abusive supervision as a negative work condition that interacts with job embeddedness to predict voluntary turnover and physical health symptoms. Abusive supervision is defined as "subordinates' perceptions of the extent to which supervisors engage in the sustained display of hostile verbal and nonverbal behaviors, excluding physical contact" (Tepper, 2000, p. 178). Behavioral descriptors consistent with this definition include disparaging language, public ridicule, threats, intimidation tactics, breaking promises, employing the "silent treatment", and purposely withholding needed information (Tepper, 2000). Previous research suggests that employees report supervisors as the most frequent source of negative treatment at work (Mitchell & Ambrose, 2007). However, limited research has been devoted to understanding leadership antecedents of subordinate voluntary turnover and physical health (Kelloway & Barling, 2010; Rubenstein, Eberly, Lee, & Mitchell, 2015). This is unfortunate, because immediate superiors are not only proximal environmental cues, but also have a large impact on working conditions.

In line with Tepper (2000, 2007), we expect that abusive supervision can drive employees to quit. Organizational environments are structured situations that provide expected

cues for appropriate behavior (Tett & Burnett, 2003) - abusive treatment is a clear violation of these rules (Bies & Moag, 1986). At the same time, we think job embeddedness theory may explain why many employees nevertheless choose to remain in such toxic relationships: embeddedness may temper positive abusive supervision-voluntary turnover relationships. This can occur because the inertial forces of numerous links, strong fit, and/or large sacrifices exert significant pressures to restrain leaving. That is, in contrast to abuse as a "push-to-leave" force, embeddedness counteracts this as an opposing "pull-to-stay" force. Holtom et al. (2012) began to address this phenomenon by showing that embeddedness makes job search less likely even in the face of negative shocks (of which abusive supervision could be one example). To better elucidate how embeddedness may restrain mobility even when exposed to adverse work conditions such as abusive supervision, we invoke conservation of resources (COR; Hobfoll, 1989) theory.

The central tenet of COR theory is that individuals strive to retain, protect, and build resources they value. A loss of resources, or a threat of such loss, produces stronger emotional reactions than does resource gain – a principle termed the "primacy of resource loss" (Hobfoll, 1989). In an integrative review applying COR and job embeddedness theories, Kiazad et al. (2015) argued that job embeddedness is negatively related to voluntary turnover because embedded employees have more resources and that they are motivated to "retain resources that hold intrinsic (sacrifices) or instrumental (fit and links) value, as resource loss is distressing" (p. 642). As such, when employees have valued resources - when they are more embedded - they are motivated to protect those resources, which could include tolerating adverse work conditions. For example, employees who have acquired particular skillsets for their organizations (i.e., high fit) may bear with abusive treatment if they believe it will be difficult to find alternative jobs utilizing the same skills elsewhere. Alternatively, because sacrifices represent valued resource

investments accrued over time, as these increase, individuals will become increasingly protective

over them, because they were difficult to obtain (Hobfoll, 2002; Kiazad et al., 2015).

Thus, we hypothesize that abusive supervision leads to increased voluntary turnover

when employees are less embedded (i.e., when they have fewer potential resource losses), but

that increased embeddedness weakens the abusive treatment-voluntary turnover relationship, as

concerns about potential resource losses override interpersonal discomfort (Mitchell & Lee,

2001; Trevor & Nyberg, 2008; Burton et al., 2010; Kiazad et al., 2015).

Hypothesis 1: Job embeddedness moderates the positive relationship between abusive
supervision and subordinates' voluntary turnover, such that the relationship will be weaker (i.e.,
less positive) when employees are more embedded.

Although more embedded employees are less likely to quit in the face of abusive

supervision, we expect they might be adversely affected by being stuck and enduring such

treatment. We focus here on impaired employee physical health. In previous research, abusive

supervision (Bowling & Michel, 2011) and supervisor undermining (Duffy et al., 2002) have

been linked to employee health symptoms. COR theory emphasizes that the threat of resource

loss can be accompanied by impaired psychological and physical well-being (Hobfoll, 2002).

However, research to date has not considered that employees' embeddedness could exacerbate

such symptoms to the degree that subordinates have to submit to abusive supervisory treatment

rather than terminate the employment relationship.

When coupled with higher job embeddedness, we propose that abusive supervision may

have deleterious effects for subordinates. As theory suggests, at higher levels of embeddedness,

employees tend to possess greater work resources, and subsequently, they are more motivated to

retain those resources by staying (Kiazad et al., 2015; Mitchell et al., 2001). However, despite

this personal imperative to retain resources, repeated exposure to a negative stimulus - the

abusive supervisor - threatens one's well-being, health, and may lead to other negative personal outcomes (Tepper, 2007). Whereas many individuals will, over time, distance themselves from such abusive treatment to avoid future unpleasant exchanges (Hess, 2000; Tepper & Lockhart, 2005), high embeddedness renders this option less feasible. Here, employees wrestle with the simultaneous forces of being abused and pushed to leave, yet being highly embedded, wanting to preserve held resources, and thereby feeling pulled to stay. For abused subordinates, we expect this position of being mistreated and having difficulty terminating the relationship to coincide with feelings of helplessness and lack of control, which can be damaging to one's health (Duffy et al., 2002; Henry, 2005). Thus, we hypothesize that abusive supervision will be positively related to subordinate physical health symptoms, and that this relationship will be exacerbated for employees reporting higher levels of embeddedness.

Hypothesis 2: Job embeddedness moderates the positive relationship between abusive supervision and subordinates' physical health symptoms, such that the relationship will be stronger (i.e., more positive) when employees are more embedded.

Study 1 Method

Sample and Procedure

Data were collected by a Japanese research company through online surveys in the greater Tokyo region at three time points. We collected data through a research company because they help to access a diverse sample of respondents and to prescreen potential respondents on a variety of characteristics (Ng & Feldman, 2013). In Japan, collecting data and accessing a diverse sample without a research company is challenging without personal contacts (Takeuchi, Lepak, Wang, & Takeuchi, 2007). Another important advantage in this study is that, unlike cases where researchers make entry through senior management, participants were made aware that responses could not be linked to their immediate supervisors (Ng & Feldman, 2013).

Data were collected from full-time employees with three surveys over a 12-month period. We used a three-wave design to mitigate concerns about common method variance (Podsakoff, Mackenzie, Lee, & Podsakoff, 2003). Participants were not aware the three surveys were related. Participation was voluntary and respondents received small incentives (on-line shopping points) for participation. At Time 1, 799 employees participated. The research company informed us the response rate was 91%. At Time 1, we measured independent and control variables. At Time 2, three months later, another survey was sent to respondents who participated at Time 1. Among those respondents, 719 completed the survey (90% response rate). At Time 2, we measured the moderator. At Time 3, 12 months after Time 1, we invited the same respondents to participate in another survey. We received 643 surveys, of which 597 were usable, representing a response rate of 89% in the final sample. At Time 3, we measured dependent variables.

The average age of respondents was 41.85 years ($SD = 9.42$), 72% were male, and 52% were married. Average tenure in the organization was 11.25 years ($SD = 9.25$). The average size of organizations in which respondents worked was 600 employees ($SD = 15720$). Categorized in line with Ono (2007), the respondents worked in the following industry areas: manufacturing (36.8%), services (22.5%), transportation and communication (8.8 %), construction (7.7%), finance, insurance, and real estate (6.5%), retail (6%), healthcare (0.7%), and other industries (11.1%). We compared participants who participated in all three surveys with those who dropped out during the 12-month period, but did not find significant differences.

Measures

Survey items were translated from English to Japanese using Brislin's (1980) method of back-translation. To ensure face validity, six bilingual individuals (English-Japanese) checked

the translated survey. Based on their suggestions, we used more polite *kanji* (logographic characters) in three statements.

Abusive supervision. Abusive supervision was measured by a 15-item scale from Tepper (2000). Respondents indicated the frequency with which their immediate supervisor engaged in 15 different abusive supervision behaviors using the response scale ranging from 1 = I cannot remember him/her ever using this behavior with me to 5 = He/she uses this behavior very often with me. A sample item is "Is rude to me." Cronbach's α was .97.

Organizational embeddedness. Organizational embeddedness was measured by a 7-item, 7-point Likert-type (1 = strongly disagree, 7 = strongly agree) global embeddedness measure (Crossley et al., 2007). A sample item is "I feel tied to this organization." Cronbach's α was .84.

Voluntary turnover. In line with prior research (e.g., Lee, Gerhart, Weller, & Trevor, 2008; Peltokorpi et al., 2015), participants reported at Time 3 if they were still employed in the same organization. If participants had left the organization, they reported whether their turnover was voluntary or involuntary. Voluntary turnover was coded 0 for stayers and 1 for leavers.

Physical health symptoms. Physical health symptoms were measured by the 18-item Physical Symptoms Inventory (PSI) from Spector and Jex (1998). The sum variable covers a wide spectrum of symptoms (e.g., chest pain). Respondents were requested at Time 3 to answer each item on the basis of their experiences over the previous 12 months, using the options for each symptom item: "No, I didn't have"; "Yes, but I didn't see doctor"; and "Yes, and I saw doctor". The total score with a potential range from 0 to 18 was the sum of all symptoms that the person reported having, whether seeing or not seeing a doctor.

Control Variables

We controlled for eight variables theorized or shown to affect our moderating and dependent variables. First, we controlled for organizational tenure (in years), because employees with longer tenure have a higher propensity for embeddedness and a lower propensity for voluntary turnover (Ng & Feldman, 2009). Second, we controlled for number of previous jobs because employees may possess internal impulses to migrate from one job to another (Ghiselli, 1974). Third, we controlled for age because younger employees tend to change jobs more frequently (Griffeth, Hom, & Gaertner, 2000). Fourth, we controlled for gender because females leave jobs more frequently (Cotton & Tuttle, 1986). Fifth, we controlled for education level because more educated employees tend to change jobs more frequently (Benson, Finegold, & Mohrman, 2004). Sixth, we controlled for average hours per week because overwork can have an impact on physical health (Spurgeon, Harrington, & Cooper, 1997) and can motivate employees to change jobs (Altonji & Paxson, 1988). Seventh, we controlled for marital status because it is related to turnover behavior (Valcour & Tolbert, 2003). Eighth, we controlled for tenure under one's supervisor (in months) because subordinates subject to supervisory abuse might have dropped out earlier (Burton, Hoobler, & Scheuer, 2012).

Analysis and Results

Before hypothesis testing, we conducted confirmatory factor analyses (CFA) to test the discriminant validity of the factors. The two-factor measurement model (abusive supervision and embeddedness) fit the data well: ($\chi^2_{(139)} = 281.98$, $p < .01$, comparative fix index [CFI] = .99, Tucker Lewis Index [TLI] = .98, root mean-square error of approximation [RMSEA] = .04) (Hu & Bentler, 1999). All factor loadings were significant ($p < .01$) and sizeable (average factor loading = .87). We then compared the two-factor model with a one-factor model. The one-factor model fit the data worse than the two-factor model: ($\chi^2_{(139)} = 919.90$, $p < .01$, CFI = .93, TLI

= .88, RMSEA = .10). Descriptive statistics and inter-correlations among the variables are reported in Table 1. We used logistic regression with SPSS version 23 to test Hypothesis 1, and the PROCESS regression macro (Hayes, 2013) to test Hypotheses 2. To reduce non-essential multicollinearity concerns (Cohen, Cohen, West, & Aiken, 2003), independent variables were mean-centered before computing product terms.

Hypothesis 1 stated that embeddedness moderates the relationship between abusive supervision and voluntary turnover such that the positive relationship is weaker under higher embeddedness. As shown in Table 2, after accounting for main effects, this interaction term was significant (B = -0.36, Wald statistic = 4.14, Odds Ratio = 0.70, $p < .05$). Hypothesis 2 stated that embeddedness moderates the relationship between abusive supervision and physical health symptoms, such that the positive relationship is stronger under higher embeddedness. As shown in Table 3, this interaction was significant (B = 0.43, t = 2.34, $p < .05$). We also tested Hypothesis 2 only with stayers, finding a robust interaction (B = 0.46, t = 2.13, $p < .05$).

Insert Tables 1 and 2 about here

To facilitate interpretation of the interaction terms, we plotted conditional slopes at high and low levels of the independent variable and moderator. Figure 1 shows that the relationship between abusive supervision and turnover is positive only when embeddedness is low. Figure 2 shows that the relationship between abusive supervision and physical health symptoms is positive only when embeddedness is high. Thus, Hypotheses 1 and 2 are supported.

Insert Figures 1 and 2 about here

Study 1: Discussion

Study 1 provides evidence to support our idea that more embedded employees are less likely to quit, despite abusive supervision. However, such retention is not without negative consequences. The relationship between abusive supervision and physical symptoms is only positive for more embedded employees. Although Japan has the second highest life expectancy in the world (World Health Statistics, 2014), the average physical symptoms reported here are comparable to previous research using the PSI (e.g., Machin & Hoare, 2008, M = 4.22; Spector & Jex, 1998, M = 5.4), and more embedded participants reporting high abusive supervision exhibited 15.8% more negative physical symptoms than did less embedded participants reporting abusive supervision. Interestingly, we found that employees reported the lowest levels of physical health complaints under conditions of high job embeddedness and low abuse, suggesting that embeddedness might be beneficial to employees so long as the circumstances surrounding them are relatively favorable (e.g., "I fit quite well here and people treat me well").

Abusive supervision does not encompass the complete domain of an adverse work environment. Other negative circumstances can also be present that lead employees to consider quitting, though embeddedness restricts such movement (Holtom, Mitchell, Lee, & Interriden, 2005). In Study 2, we considered a broader range of adverse work conditions that we expect to interact with embeddedness to affect employee outcomes. Specifically, our purpose in Study 2 is to attempt to replicate the interactional pattern of job embeddedness-by-adverse work conditions by considering abusive supervision (a partial replication of Study 1) as well as job insecurity. We also examine additional outcomes that could result from this negative experience: emotional exhaustion and sleep impairment.

Study 2 assesses this pattern in a different national cultural context, namely in the U.S.A. In comparison to the U.S.A., Japan is a more collectivistic country (Hofstede, 2001), where the

self is defined more interdependently and individuals feel a stronger duty to uphold social

obligations and to maintain relationships (Markus & Kitayama, 1991). Since the Japanese have

been found to hold strong reciprocal ties and have difficulty breaking them (Peltokorpi, 2013),

job embeddedness can be expected to play a particularly strong role in explaining reactions to

adverse work conditions. Thus, there is value in studying these relationships in a more

individualistic context, to see if the potentially negative effects of feeling embedded in adverse

conditions hold when individuals may feel less compunction about breaking such ties. At the

same time, Japan is a higher power distance country than is the U.S.A. (Carl, Gupta, & Javidan,

2004). In higher power distance countries, individuals tend to find unequally distributed power

more acceptable and are less likely to react negatively to supervisory wrongdoing than are those

in lower power distance contexts (Vogel, Mitchell, Tepper, Restubog, Hu, Hua, & Huang, 2015).

Thus, there is also value in studying these relationships in a lower power distance context, to see

if the potentially negative effects of feeling embedded in adverse work conditions operate when

individuals may react more strongly to abusive supervision.

Study 2

We sought to constructively replicate the pattern by which abusive supervision interacts

with job embeddedness to affect employee well-being. We consider two health-related outcomes

that may also be a function of the resource threat associated with being embedded in an abusive

supervisor-subordinate relationship: emotional exhaustion and sleep quantity/quality.

Emotional exhaustion refers to "feelings of being overextended and depleted of one's

emotional and physical resources" (Maslach & Leiter, 2008, p. 498). In previous research, COR

theory has been used to link abusive supervision to emotional exhaustion (e.g., Aryee, Chen,

Sun, & Debrah, 2007; Chi & Liang, 2013). Coping with repeated abuse from a supervisor taxes

one's emotional resources and can lead to emotional exhaustion. Emotional exhaustion is a state of impoverished personal resources, which constrains further investment in resources, and leads to further resource loss. We think this resource depletion can be exacerbated by perceptions of being more highly embedded. Greater embeddedness is likely to constrain behavioral responses to the abusive supervision, such as leaving the situation, leading victims to endure the abuse and associated resource depletion, resulting in emotional exhaustion.

In a similar manner, we expect abusive supervision to be associated with worsened sleep quantity/quality, and for this relationship to be exacerbated under conditions of greater embeddedness. On average, individuals spend more time sleeping than they do working (Barnes, Wagner, & Ghumman, 2012): "…sleep constitutes a large portion of people's day-to-day lives that ought to be considered by organizational researchers" (p. 790). Sleep is also a primary mediator between work events and employee health, attitudes, and behavior (Melamed et al., 2006; Knudsen, Ducharme, & Roman, 2007), restoring personal resources needed for effective functioning (Barnes, 2012; Barnes & Hollenbeck, 2009; Pilcher & Huffcutt, 1996). As a confrontational, provocative behavior, abusive treatment has been linked to negative reactions such as fear, irritation, and anger, as well as to resistance behaviors and turnover intentions (Martinko et al., 2013; Tepper, 2007). When abusive treatment occurs, we expect that employee's sleep will also be impaired. The heightened emotional arousal evoked by abuse coincides with increased cognitive activity (Harvey, Tang, & Browning, 2005), which is antithetical to the required relaxation and reduced responsiveness that sleep onset demands (Thomsen et al., 2003). Further, we propose that abusive supervision is more likely to disrupt sleep when employees are more embedded. Whereas abusive treatment pushes employees away from their work environment, high embeddedness pulls individuals to continue working and to

comply with requests, as other employees may be dependent on the embedded individual (i.e.,

high links), and any act of withdrawal could lead to resource loss (Kiazad et al., 2015). Thus, we

expect sleep to be an additional indicator of difficulty coping with feeling stuck in an abusive

environment, as employees endure the effects of abuse, yet are hesitant to take action to escape

their negative circumstances.

Hypothesis 3: Job embeddedness moderates the positive relationship between abusive
supervision and emotional exhaustion, such that the relationship will be stronger (i.e., more
positive) when employees are more embedded.

Hypothesis 4: Job embeddedness moderates the negative relationship between abusive
supervision and sleep quantity/quality, such that the relationship will be stronger (i.e., more
negative) when employees are more embedded.

Up to this point, we have focused on being embedded in the face of abusive supervision.

We believe our underlying ideas apply to other aversive conditions, and extend our theorizing to

job insecurity, defined as the "perceived powerlessness to maintain desired continuity in a

threatened job situation" (Greenhalgh & Rosenblatt, 1984, p. 438). This definition suggests that

job insecurity connotes a feeling of fear, powerlessness, and lack of control, that individuals are

unable to be protected from losing their job, and that they hold unclear expectancies about what

actions would be necessary for them to keep the job. Research shows that job insecurity is linked

to impaired physical and mental health (Sverke, Hellgren, & Näswall, 2002) and sleep (Ashford,

Lee, & Bobko, 1989). Even though the definition suggests a desire to stay, job insecurity often

produces a withdrawal response, as threatened employees may seek alternatives as a means of

rationally securing control over their situation and trying to eliminate the stressor (Ashford et al.,

1989; Sverke et al., 2002). Increased embeddedness, however, impedes this withdrawal response

(Mitchell et al., 2001). Enmeshing links, idiosyncratic fit, and high sacrifices work together to

reinforce employees' stuckness, leaving them in a precarious position of simultaneously having difficulty leaving, while still being threatened with the possibility that they may be forced out.

Hypothesis 5: Job embeddedness moderates the positive relationship between job insecurity perceptions and emotional exhaustion, such that the relationship will be stronger (i.e., more positive) when employees are more embedded.

Hypothesis 6: Job embeddedness moderates the negative relationship between job insecurity and sleep quantity/quality, such that the relationship will be stronger (i.e., more negative) when employees are more embedded.

Study 2 Method

Sample and Procedure

We used a Qualtrics Panel service to collect data through online surveys in the U.S.A. Qualtrics is a third-party research company that administers online surveys through a participant pool in which researchers can "pay per respondent". The service has increasingly been used to collect data in the management discipline (e.g., Long, Bendersky, & Morrill, 2011). In return for participation, panels are compensated with "survey cash", which they are able to exchange for actual compensation in online marketplaces (participants were paid roughly US$7 per survey).

Data were collected from full-time employees with two surveys at two points in time over a three-month period. To obtain sufficient power to detect interaction effects (Cohen, 1992), we aimed for a final sample of approximately 300 employees. At Time 1, we sought a sample of 600 employees with the expectation of 50% attrition at Time 2. We obtained 600 responses at Time 1, from an initial solicitation of 1,125 individuals (53% response rate). Qualtrics informed us that this response rate is partially a function of some survey solicitations being deleted due to spam blockers or other communication impediments. At Time 1, we measured independent, moderator, and control variables. At Time 2, we measured dependent variables. We obtained a

matched sample of 305 individuals who responded to Time 1 and Time 2 surveys. However, some responses to key variables were left blank, leaving a final usable sample of 283.

The average age of respondents was 47 (*SD*=10.42); 59% were female; and 84% were Caucasian. Average tenure in the organization was 10.20 years (*SD*=8.49); and their average education was 4.33 out of 7, indicating roughly between an associate's and bachelor's degree. Respondents represented a broad range of occupations, including government work, tourism, law enforcement, and information technology, among others. As with Study 1, we compared participants who participated in both surveys to those who only completed survey 1. We found no significant differences on substantive variables of interest (i.e., independent variables or moderators), though there were slightly more males who did both surveys (0.15 difference in gender means), and those who did both surveys were slightly older (about 2 years).

Measures

Abusive Supervision. Similar to Study 1, abusive supervision was measured by the 15-item scale from Tepper (2000). Cronbach's α was .96.

Organizational Embeddedness. Organizational embeddedness was measured with a 5-point Likert-type (1 = strongly disagree, 5 = strongly agree) abbreviated scale from Mitchell et al. (2001). Given our focus on on-the-job embeddedness, we relied on the nine items capturing this facet, with three items for each dimension of links, fit, and sacrifice. Sample items are "I work closely with my coworkers" (links), "My job utilizes my skills and talents well" (fit), and "I would sacrifice a lot if I left this job" (sacrifice). As a formative or causal indicator index, the original measure is theorized to independently aggregate to overall embeddedness (Mitchell et al., 2001). While it is generally inappropriate to consider reliability for this construct, Cronbach's

α was an acceptable .89. Notably, using this scale enables replication of our interaction pattern with the two most common measures of embeddedness.

Job Insecurity. Job insecurity was measured with a 10 item, 6-point Likert-type (1 = never, 6 = all the time) scale from Huang, Niu, Lee, and Ashford (2012). We opted for an affective insecurity measure to capture respondents' feelings about their future with their job. A sample item is "I am worried that this company will fire me any time". Cronbach's α was .90.

Emotional exhaustion. Emotional exhaustion was measured with a 9-item, 5-point Likert-type (1 = strongly disagree, 5 = strongly agree) scale from Maslach and Jackson (1981). A sample item is "I feel emotionally drained". Cronbach's α was .91.

Employee Sleep Index. This measure consists of two items reflecting sleep quantity and quality (Buysse, Reynolds, Monk, Berman, & Kupfer, 1988). The sleep quantity item asked participants to estimate (in minutes) the average amount of time they had actually spent sleeping per night over the past month. Consistent with previous research (Barnes, Schaubroeck, Huth, & Ghumman, 2011; Barnes et al., 2012), participants were cautioned that this number might have been different from the total time spent in bed. The sleep quality item asked "During the past month, how would you rate your sleep quality overall?" and rated on a 7-point Likert-type scale (1=horrible, 7=terrific). Given the separate item ranges, we first standardized both and then computed a single mean "employee sleep index" score. Cronbach's α was .66.

Control Variables

The demographic controls from Study 1 were included for prior relationships with turnover, but were largely uncorrelated with our health-related outcomes (and their inclusion did not change results). For robustness, in Study 2 we controlled for age, gender, education level, marital status, and tenure. Given that dispositions can affect sleep (Barnes et al., 2011) and

exhaustion (Swider & Zimmerman, 2010), we also controlled for *trait neuroticism*, measured by an 8-item, Likert-type (1=strongly disagree, 5=strongly agree) scale (Saucier, 1994). Respondents were asked on how much they agreed with how adjectives such as "moody" or "temperamental" described them in general. Cronbach's α was .86.

Analyses and Results

In line with Study 1, we performed a CFA. However, it should be noted that the Mitchell et al. (2001) embeddedness scale is a causal indicator model, and thus CFA is generally not appropriate. Still, the distinct-factor measurement model had a good fit to the data ($\chi^2_{(396)}$ = 849.03, $p < .01$, CFI = .91, TLI = .90, RMSEA = .08), and had significantly better fit than a one-factor model ($\chi^2_{(819)}$ = 5,075.27, $p < .01$, CFI = .35, TLI = .31, RMSEA = .23). All factor loadings were significant ($p < .01$) and sizable (average factor loading = .79). Descriptive statistics and inter-correlations among variables are reported in Table 4.

Consistent with Study 1, independent variables were mean-centered before computing interaction terms (Cohen et al., 2003) and interaction tests were conducted using the PROCESS macro in SPSS (Hayes, 2013). Hypothesis 3 stated that embeddedness would moderate the positive relationship between abusive supervision and emotional exhaustion, such that the relationship is stronger when employees are more embedded. As shown in Table 5, this interaction was significant (B = 0.20, t = 2.13, $p < .05$). Hypothesis 4, stating that embeddedness moderates the positive relationship between abusive supervision and sleep, was not supported (B = .07, t = 0.61, $p > .05$). Hypotheses 5 and 6, respectively, stated that embeddedness moderates the positive relationship between job insecurity and emotional exhaustion, and the negative relationship between insecurity and sleep, such that these relationships are stronger when

employees are more embedded. As shown in Table 6, Hypothesis 5 was not supported (B = 0.03, t = 0.45, $p > .05$); yet, the Hypothesis 6 interaction was significant (B = -0.15, t = -2.33, $p < .05$).

We plotted conditional slopes at high and low levels of the independent and moderator variables (see Figures 3 and 4). Figure 3 shows that the relationship between abusive supervision and emotional exhaustion is stronger when embeddedness is high. Figure 4 shows that the relationship of job insecurity with sleep is more negative when embeddedness is high. Thus, Hypothesis 3 and 6 are supported.

Insert Tables 4 - 6 and Figures 3 and 4 about here

Study 2: Discussion

Study 2 partially replicates and builds on the results of Study 1 by highlighting the harmful outcomes that can be associated with being embedded in adverse work environments. We constructively replicated the interactive influence of an abusive work environment on employee well-being, finding that abusive supervision was more positively associated with emotional exhaustion for those higher in job embeddedness, while demonstrating this effect with an alternative measure of embeddedness, in a distinct national cultural context, and with a personality control variable. The results also reveal that embeddedness interacts with a second factor representing a negative work environment. We found those who report higher levels of insecurity under high embeddedness were also likely to suffer. Thus, feelings of stuckness may permeate throughout organizational life. The results of Study 2 also expose a broader spectrum of consequences that can result for employees who feel stuck in an adverse workplace. Notably, we found a significant interaction for sleep quantity/quality, which studies have shown may extend to influence other undesirable work behaviors (Barnes et al., 2011). Though needed levels

of sleep vary across individuals, it is generally recommended that healthy adults obtain roughly 7-8 hours per night (Mayo Clinic, 2013). Yet, those in the most negative condition (i.e., high embeddedness, high adverse work environment) reported receiving almost a full hour less sleep than average each night - and worse-quality sleep - indicating potentially serious deprivation (Bonnet & Arand, 1995).

General Discussion

To date, the primary assessment of job embeddedness has been of its merits (Mitchell et al., 2001; Jiang et al., 2012). Researchers present embeddedness as a desirable quality, and most practical implications encourage finding ways to increase employee embeddedness so as to reduce turnover and increase social cohesion. The present studies were an attempt to shed light on a less examined negative aspect of embeddedness - employees who feel stuck in a negative employment context (Hom et al., 2012). Previous research has shown that being embedded can encourage employees to behave in ways that benefit the *organization*, even in the face of negative workplace events (e.g., refraining from job search or counterproductive behaviors, maintaining contributions). In Study 1, we demonstrated this effect by showing that being embedded mitigates the likelihood that employees will quit in the face of abusive supervision. However, what about the effects of remaining in aversive conditions on the *individual*? We found that under adverse conditions, increased embeddedness can harm rather than help employees, revealing a boundary condition of embeddedness' favorable influence (Jiang et al., 2012). Thus, while embeddedness itself is value neutral, the environment in which one is embedded must also be considered. In shifting attention to a "dark side" of embeddedness, we contribute to theoretical discussions encouraging researchers to challenge "established facts" in management. (Ng & Feldman, 2012; Pierce & Aguinis, 2013).

Theoretical Implications and Future Research Directions

In some ways, our findings reinforce the foundations of job embeddedness theorizing, as embeddedness is certainly important to retention. Consistent with previous research (Jiang et al., 2012), we found that higher embeddedness did predict lower turnover likelihood, while also answering calls for research on embeddedness' applicability in non-Western contexts (Holtom et al., 2008; Peltokorpi et al., 2015; Ramesh & Gelfand, 2010). Going beyond previous research, we find that embeddedness deters quitting even in hostile workplaces, providing perhaps unsettling testament to its influence in constraining employee decision-making. However, we did not replicate the buffering effect of embeddedness between abusive supervision and turnover in Study 2; future research should aim to replicate this finding in other contexts.

Though embedded employees were less likely to quit in adverse work environments, being stuck in these conditions was associated with serious negative consequences. To date, theory and research have mainly concentrated on how job embeddedness retains employees, without attending to the concern of retained employees' welfare. These findings are particularly relevant to theory on the buffering effects of embeddedness. For example, turnover theorists have integrated the unfolding model with embeddedness theory to describe how embeddedness can buffer or mitigate the effects of negative shocks on turnover and performance (Mitchell & Lee, 2001). Our findings do support this perspective, but also point to a key additional consideration: while mitigating the effect of negative shocks (such as abusive supervision) on quitting, embeddedness may, at the same time, exacerbate the effect of negative shocks on individual well-being – precisely because embeddedness constrains leaving and removing oneself from the aversive situation.

Our results provide indirect corroboration as well for research on commitment profiles. This research stream suggests that employees high in continuance or normative commitment, in the absence of strong affective commitment, tend to report greater stress and other negative outcomes (Sinclair et al., 2005). We demonstrate additional negative health outcomes associated with feeling stuck.

Relatedly, our results have implications for nascent theorizing on Hom et al.'s (2012) expanded criterion model. They suggest reluctant stayers, particularly those who feel trapped, will exhibit dysfunctional behaviors such as reduced contributions and increased deviance. However, this is at odds with embeddedness research showing that embeddedness buffers the effects of negative shocks on contributions and deviance (Burton et al., 2010; Holtom et al., 2012). Our results suggest a key temporal element to this theorizing that future research will need to address. Namely, embeddedness may constrain performance decrements and deviance in the face of negative shocks, treatment, and conditions *in the short run*; however, our results showing the exacerbating effects of embeddedness on employee well-being suggest that, *in the long run*, performance decrements and deviance may be more likely (perhaps even inevitable). Alternatively, another possibility is that rather than through overt reactions, stuck employees may resort to insidious ways to act out frustration (e.g., social undermining; sabotage).

On the other side, though, being embedded in a *favorable* work environment can be an ideal situation. Though our focus was to explore the dark side of embeddedness, in testing our interaction effects, we uncovered equally novel results for the bright side. In examining the visual interaction plots, we see that those who are embedded in positive work environments (i.e., low abusive supervision, low job insecurity) had the fewest physical health problems, lowest emotional exhaustion, and reported the best sleep. Meanwhile, the conditional slope for low

embeddedness was generally zero (across conditions). Thus, moderating effects suggest higher embeddedness is best considered a double-edged sword, providing a comforting safety net for those who are favorably embedded, but a vicious entanglement for those unfavorably embedded.

With Study 1, we also extend embeddedness and abusive supervision research to a non-Western, developed country context. To date, the bulk of abusive supervision research in non-Western settings has been conducted in less-developed East Asian countries, such as China and the Philippines (Martinko et al., 2013), yet limited research has examined embeddedness and voluntary turnover in non-Western contexts (Holtom et al., 2008). In line with previous research, our findings suggest that abusive supervision predicts subordinates' voluntary turnover (Tepper, 2000) and physical symptoms (Bowling & Michel, 2011) in Japan. Further, our findings suggest that the global job embeddedness (Crossey et al., 2007) and abusive supervision (Tepper, 2000) measures are valid constructs in Japan. Taken together, the findings support the cross-cultural applicability of abusive supervision and job embeddedness relationships.

Though the overall pattern of moderation results provided support for the "dark side" of embeddedness, some predictions were contrary to expectations. Embeddedness failed to moderate job insecurity effects on emotional exhaustion. This is surprising because our theorizing suggested the lack of control and feelings of helplessness associated with high job insecurity would be troubling to many employees. It may be that abusive supervision produces a qualitatively different negative feeling compared to insecurity. The visceral and direct experience of abuse may have more pronounced effects on resource threat than more vague and distal feeling of insecurity. Items for emotional exhaustion entail feeling burned out and emotionally drained from one's work. While higher insecurity can still allow "the show to go on" - at least on the job - abusive supervision still may be especially harmful.

Our theorizing hints at but does not directly address potential mediating mechanisms that would provide additional explanation of how or when job embeddedness and aversive work conditions interact. For example, when abusive treatment occurs, individuals exert effort to process and make sense of this negative deviation from expected behavior (Bies & Moag, 1986; Nolen-Hoeksema, McBride, & Larson, 1997). We think this is especially likely to be the case for highly embedded employees, who are likely to dwell on the abusive treatment, their feelings in response to the treatment, and how they might respond, while being frustrated that they cannot easily quit the job. These negative emotional reactions coincide with increased cognitive arousal and worry (i.e., unwanted intrusive thoughts; Harvey et al., 2005), which could be associated with emotional exhaustion and are antithetical to the required relaxation and reduced responsiveness sleep onset demands (Thomsen et al., 2003). Thus, future research that considers cognitive processes such as rumination, thereby providing additional perspectives on how individuals respond to being stuck in adverse work conditions, would be valuable.

Theoretically, we adopted a COR perspective, suggesting that the motivation to preserve resources would constrain embedded employees from leaving even in the face of aversive work conditions and negative health outcomes. Our findings provide an initial empirical test bridging embeddedness theorizing with COR theory (e.g., Kiazad et al., 2015), and also suggest future research on the inevitable tension created by embeddedness coupled with an adverse work environment. More specifically, COR theory states that individuals are motivated to retain, protect, and build resources they value. Yet, the abusive supervision, job insecurity, and turnover literatures highlight that negative work environments create salient pressures to make people want to leave. Two interesting research questions, then, are: what factors determine individual thresholds or tipping points at which abusive supervision overpowers embedding forces, leading

to quitting; and, when embedded employees are faced with aversive work conditions, to where do they turn for additional resources to combat abuse or to cope with difficult conditions?

Practical Implications

The moderating effects of embeddedness have practical implications. On the one hand, despite abusive supervision, the findings do show that organizations can retain employees by increasing their job embeddedness. Thus, for the purely retention-oriented manager, finding ways to increase employee embeddedness is likely to reduce voluntary turnover. However, the results also reveal that this solution might not be sustainable, at least in adverse work environments. Being embedded in such a workplace may be detrimental to employee well-being, in terms of physical health, emotional exhaustion, and sleep loss. Although previous research suggests that feeling embedded in negative work conditions does not reduce contributions or increase deviance, our results showing detrimental effects on employee health suggest that over longer time periods performance decrements and increased deviance might be more likely. When considered together, we recommend that organizational stakeholders first attend to work environment characteristics before seeking to increase embeddedness. This is consistent with suggestions from commitment profile research suggesting it makes little sense to focus *only* on fostering continuance commitment (Sinclair et al., 2005; Wasti, 2005); instead, efforts to tie individuals to organizations must be coupled with efforts to create a healthy environment. For example, this could involve reassuring employees of their job security or identifying abusive treatment at its source and making clear efforts to curb such behavior.

Counter-intuitively, organizations may need to provide additional support and resources for those most tied to the organization. Our findings suggest retaining employees in adverse work environments may not be sustainable. For embedded employees who are victims of abuse

or feel their job is insecure, organizations may provide counseling services or access to employee assistance programs (EAPs) to mitigate the negative effects we have described above. In finding that sleep impairment can be linked to embeddedness, counseling and EAPs may be particularly beneficial, lest employees seek mere palliative solutions such as sleeping pills, alcohol, or other hypnotics, which in the long term, can generate their own problems (Kripke, 2000).

Limitations

In both studies, we used a research company to recruit respondents and collect data. While enabling access to a diverse sample of respondents, one potential concern in using online surveys with incentives is whether respondents are mainly motivated by extrinsic rewards. In line with Ng and Feldman (2013), though, we checked for unusual response patterns, such as answering all questions identically. We also inserted attention checks, page breaks, reverse-coded items, and reminders to answer honestly, while reinforcing how responses were anonymous. If extrinsic rewards primarily drove participation, we might have seen a pattern of unusually high correlations among measures that should not correlate especially highly. However, we found no such cases (and a realistic average time period for survey completions) in either study, suggesting participants deliberated in responding and did not "fly through" surveys.

The measures in our studies were collected through self-reports. To partially mitigate common method concerns, we collected data at several points in time over a number of months, minimizing the effects of potential transitory biases at the time of the survey. Because subordinates are most knowledgeable about how they perceive the treatment of others and experience emotional exhaustion, self-reports are appropriate in our studies (Chan, 2009). Further, the results derived through CFA suggested that common method variance did not significantly impair our ability to adequately test the hypotheses of this study. Perhaps most

importantly, the interaction effects cannot be artifacts of common method variance, and in fact are likely to be deflated and more difficult to detect (Siemsen, Roth, Oliveira, 2010).

The amount of variance explained was modest for some variables, such as the sleep index. A wide variety of variables an influence sleep; for example, past studies (e.g. Barnes et al., 2012) have found that incorporating how one's time is spent on the job can improve prediction of sleep outcomes. With this in mind, future research would do well to explore how things like workload or social interdependence operate alongside embeddedness and abusive supervision to predict sleep. There may also be a temporal element to the prediction of sleep difficulty. We assessed average evaluations of sleep over a one-month period, assuming that feeling stuck is an on-going concern. However, particularly harsh episodes of abusive supervision might be expected to influence sleep that night, especially for those who can't escape. Future research able to more finely track the timing of abuse and sleep difficulty would be valuable.

We focused on on-the-job embeddedness believing it to be most relevant to feeling stuck in aversive work conditions. However, it is certainly the case that off-the-job or community embeddedness could matter in some circumstances (Lee et al., 2004): for example, being deeply embedded in a community could also lead to feeling stuck with negative work conditions (although Allen [2006] emphasized that this is most likely when changing jobs would require relocating out of the community). In Study 2, we did have data on community embeddedness. We therefore tried to replicate the Study 2 analyses using only community embeddedness, but found no significant main or interaction effects. We also tried replicating Study 2 analyses with community embeddedness as a covariate to on-the-job embeddedness, but again the pattern of results did not change. Thus, the results were consistent with our theorizing that on-the-job

embeddedness aligns more strongly to the potentially negative outcomes of feeling stuck in aversive work conditions. However, future research should consider the possibility that community embeddedness contributes to feeling stuck in other contexts, such as for jobs or locations for which escaping aversive work conditions would require relocation out of the community. Alternatively, there may be circumstances when community embeddedness offsets other aversive work conditions, for example, by providing opportunities to replenish resources, such as enjoyable activities, neighbor support, or other community resources.

Finally, other factors might also make employees feel trapped and unable to quit, such as a lack of perceived alternative job opportunities. Mitchell et al. (2001, p. 1106) noted that their embeddedness measure "include[s] no items assessing job alternatives", yet we envision that an abused employee with nowhere else to go could exhibit a similar pattern of aversive outcomes. Future research that explores such additional perspectives on feeling stuck would be valuable.

Conclusion

In two studies, we provide evidence for a potential "dark side" of job embeddedness. Results reveal that employees who find themselves embedded in an adverse workplace are more likely to exhibit negative health outcomes, even though (or perhaps because) they may be less likely to quit. To date, being embedded is viewed as a generally desirable characteristic that managers seek to increase, given its relationship to numerous positive outcomes. However, given the results reported herein, we advise that strategic retention efforts necessarily must take into account the context in which employees are embedded, so as to avoid its potentially unintended negative effects.

References

Ahola, K., & Hakanen, J. (2007). Job strain, burnout, and depressive symptoms: A prospective study among dentists. *Journal of Affective Disorders*, *104*, 103-110.

Allen, D. G. (2006). Do organizational socialization tactics influence newcomer embeddedness and turnover? *Journal of Management, 32*, 237-256.

Altonji, J., & Paxson, C. (1988). Labor supply preferences, hours constraints, and house-wage tradeoffs. *Journal of Labor Economics, 6,* 254-276.

Aryee, S., Chen, Z. X., Sun, L. Y., & Debrah, Y. (2007). Antecedents and outcomes of abusive supervision: Test of a trickle-down model. *Journal of Applied Psychology*, *92*, 191-201.

Ashford, S., Lee, C., & Bobko, P. (1989). Content, cause, and consequences of job insecurity: A theory-based measure and substantive test. *Academy of Management Journal*, *32*, 803-29.

Barnes, C. M. (2012). Working in our sleep: Sleep and self-regulation in organizations. *Organizational Psychology Review, 2,* 234-257.

Barnes, C. M., & Hollenbeck, J. R. (2009). Sleep deprivation and decision-making: Burning the midnight oil or playing with fire? *Academy of Management Review*, *34*, 56-66.

Barnes, C. M., Schaubroeck, J., Huth, M., & Ghumman, S. (2011). Lack of sleep and unethical conduct. *Organizational Behavior and Human Decision Processes*, *115*, 169-180.

Barnes, C. M., Wagner, D. T., & Ghumman, S. (2012). Borrowing from sleep to pay work and family: Expanding time-based conflict to the broader nonwork domain. *Personnel Psychology*, *65*, 789-819.

Benson, G. S., Finegold, D., & Mohrman, S. A. (2004). You paid for the skills, now keep them: Tuition reimbursement and voluntary turnover. *Academy of Management Journal*, *47*, 315-331.

Bies, R. J., & Moag, J. F. (1986). Interactional justice: Communication criteria of fairness. *Research on Negotiations in Organizations*, *1*, 43-55.

Bonnet, M. H., & Arand, D. L. (1995). We are chronically sleep deprived. *Sleep, 18*, 908-911.

Bowling, N. A., & Michel, J. S. (2011). Why do you treat me badly? The role of attributions regarding the cause of abuse in subordinates' responses to abusive supervision. *Work & Stress*, *25*, 309-320.

Brislin, R. W. (1980). Translation and content analysis of oral and written materials. In H. C. Triandis, & W. W. Lambert (Eds.), *Handbook of cross-cultural psychology* (pp. 349-444). Boston: Allyn & Bacon.

Buckingham, M., & Coffman, C. (1999). *First, break all the rules: What the world's greatest managers do differently*. Simon and Schuster.

Burton, J. P., Holtom, B. C., Sablynski, C. J., Mitchell, T. R., & Lee, T. W. (2010). The buffering effects of job embeddedness on negative shocks. *Journal of Vocational Behavior*, 76, 42-51.

Burton, J. P., Hoobler, J. M., & Scheuer, M. L. (2012). Supervisor workplace stress and abusive supervision: The buffering effect of exercise. *Journal of Business and Psychology*, *27*, 271-279.

Buysse, D. J., Reynolds, C. F., Monk, T. H., Berman, S. R., & Kupfer, D. J. (1989). The Pittsburgh Sleep Quality Index: a new instrument for psychiatric practice and research. *Psychiatry Research*, *28*, 193-213.

Carl, D., Gupta, V., & Javidan, M. (2004). Power distance. In R. J. House, P. J. Hanges, M. Javidan, P. W. Dorfman, & V. Gupta (Eds.), *Culture, leadership, and organizations: The GLOBES study of 62 societies* (pp. 513-563). Thousand Oaks, CA: Sage.

Chan, D. (2009). So why ask me? Are self-report data really that bad. *Statistical and methodological myths and urban legends: Doctrine, verity and fable in the organizational and social sciences*, 309-336.

Chi, S. C. S., & Liang, S. G. (2013). When do subordinates' emotion-regulation strategies matter? Abusive supervision, subordinates' emotional exhaustion, and work withdrawal. *The Leadership Quarterly*, *24*, 125-137.

Cohen, J. (1992). A power primer. *Psychological Bulletin*, *112*, 155-159.

Cohen, J., Cohen, P., West, S. G., & Aiken, L. S. (2003). *Applied multiple regression/correlation analysis for the behavioral sciences* (3rd ed.). Mahwah: New York: Lawrence Erlbaum.

Cotton, J. L., & Tuttle, J. M. (1986). Employee turnover: A meta-analysis and review with implications for research. *Academy of Management Review*, *11*, 55-70.

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,* 1031-1042.

Duffy, M. K., Ganster, D. C., & Pagon, M. (2002). Social undermining in the workplace. *Academy of Management Journal*, *45*, 331-351.

Feldman, D. C., Ng, T.W.H., & Vogel, R.M. (2012). Off-the-job embeddedness: A reconceptualization and agenda for future research. In J.J. Martocchio, A. Joshi, & H. Liao (Eds.), *Research in Personnel and Human Resources Management*, Vol. 31 (pp. 209-251), Emerald: Bingley.

Ghiselli, E. E. (1974). Some perspectives for industrial psychology. *American Psychologist, 29*, 80-87.

Goh, J., Pfeffer, J., & Zenios, S. A. (2016). The relationship between workplace stressors and mortality and health costs in the United States. *Management Science*, *62,* 608-628.

Greenhalgh, L., & Rosenblatt, Z. (1984). Job insecurity: Toward conceptual clarity. *Academy of Management Review*, *9*, 438-448.

Griffeth, R. W., Hom, P. W., & Gaertner, S. (2000). A meta-analysis of antecedents and correlates of employee turnover: Update, moderator tests, and research implications for the next millennium. *Journal of Management*, *26*, 463-488.

Harvey, A. G., Tang, N. K., & Browning, L. (2005). Cognitive approaches to insomnia. *Clinical Psychology Review*, *25*, 593-611.

Hayes, A. F. (2013). *Introduction to mediation, moderation, and conditional process analysis: A regression based analysis*. New York: Guilford Press.

Henry, P.C. (2005). Life stress, explanatory style, hopelessness, and occupational stress. *International Journal of Stress Management, 12,* 241–256.

Hess, J. (2000). Maintaining nonvoluntary relationships with disliked partners: An investigation into the use of distancing behaviors. *Human Communication Research*, *26*, 458-488.

Hobfoll, S. E. (1989). Conservation of resources: A new attempt at conceptualizing stress. *American Psychologist*, *44*, 513-524.

Hobfoll, S. E. (2002). Social and psychological resources and adaptation. *Review of General Psychology*, *6*, 307-324.

Hofstede, G. (2001). *Culture's consequences: Comparing values, behaviors, institutions, and organizations across nations*. Thousand Oaks, CA: Sage.

Hollenbeck, J. R. (2008). The role of editing in knowledge development: Consensus shifting and consensus creation. In In Y. Baruch, A. M. Konrad,, H. Aguinis, & W. H. Starbuck

(Eds.), *Journal editing: Opening the black box of editorship* (pp. 16-26). San Francisco: Jossey Bass.

Holtom, B. C., Burton, J., & Crossley, C. (2012). How negative affectivity moderates the relationship between shocks, embeddedness and worker behaviors. *Journal of Vocational Behavior*, *80*, 434-443.

Holtom, B. C., Mitchell, T. R., Lee, T. W., & Eberly, M. B. (2008). Turnover and retention research: A glance at the past, and a closer review of the present, and a venture into the future. *The Academy of Management Annals*, *2*, 231-274.

Holtom, B. C., Mitchell, T. R., Lee, T. W., & Inderrieden, E. J. (2005). Shocks as causes of turnover: What they are and how organizations can manage them. *Human Resource Management*, *44*, 337-352.

Hom, P. W. & Griffeth, R. W. (1995). *Employee turnover.* Cincinnati, OH; South-Western.

Hom, P. W., Mitchell, T. R., Lee, T. W., & Griffeth, R. W. (2012). Reviewing employee turnover: focusing on proximal withdrawal states and an expanded criterion. *Psychological Bulletin, 138,* 831-858.

Hom, P. W., Tsui, A. S., Lee, T. W., Ping, P. F., Wu, J. B., & Zhang, A. Y. (2009). Explaining employment relationships with social exchange and job embeddedness. *Journal of Applied Psychology*, *94*, 277-297.

Hu, L., & Bentler, P. M. (1999). Cutoff criterion for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling*, *6,* 1-34.

Huang, G. H., Niu, X., Lee, C., & Ashford, S. (2012). Differentiating cognitive and affective job insecurity: Antecedents and outcomes. *Journal of Organizational Behavior*, *33*, 752-769.

Jiang, K., Liu, D., McKay, P. F., Lee, T. W., & Mitchell, T. R. (2012). When and how is job embeddedness predictive of turnover? A meta-analytic investigation. *Journal of Applied Psychology, 97,* 1077-1096.

Johns, G. (2006). The essential impact of context on organizational behavior. *Academy of Management Review, 31,* 386-408.

Kelloway, E. K., & Barling, J. (2010). Leadership development as an intervention in occupational health psychology, *Work & Stress*, *24,* 260-279.

Kiazad, K., Holtom, B. C., Hom, P. W., & Newman, A. (2015). Job embeddedness: A multifoci theoretical extension. *Journal of Applied Psychology*, *100*, 641-659.

Knudsen, H.K., Ducharme, L.J., & Roman, P.M. (2007). Job stress and poor sleep: Data from an American sample of full-time workers. *Social Science & Medicine, 10,* 1997-2007.

Kripke, D. F. (2000). Chronic hypnotic use: deadly risks, doubtful benefit. *Sleep Medicine Reviews*, *4*, 5-20.

Lee, T. H., Gerhart, B., Weller, I., & Trevor, C. (2008). Understanding voluntary turnover: Path-specific job satisfaction and the importance of unsolicited job offers. *Academy of Management Journal*, *51*, 651-671.

Lee, T. W., Burch, T. C., & Mitchell, T. R. (2014). The story of why we stay: A review of job embeddedness. *Annual Review of Organizational Psychology and Organizational Behavior*, *1*, 199-216.

Lee, T. W. & Mitchell, T. R. (1994). An alternative approach: the unfolding model of voluntary employee turnover. *Academy of Management Review, 19,* 51-89.

Lee, T. W., Mitchell, T. R. Sablynski, C. J., Burton, J. P., & Holtom, B. C. (2004). The effects of job embeddedness on organizational citizenship, job performance, volitional absences, and voluntary turnover. *Academy of Management Journal*, *47*, 711-722.

Lewin, K. (1951). *Field theory in social science.* New York: Harper.

Long, C. P., Bendersky, C., & Morrill, C. (2011). Fairness monitoring: Linking managerial controls and fairness judgments in organizations. *Academy of Management Journal*, *54*, 1045-1068.

Machin, M. A., & Hoare, P. N. (2008). The role of workload and driver coping styles in predicting bus drivers' need for recovery, positive and negative affect, and physical symptoms, *Anxiety, Stress & Coping*, *21*, 359-375.

March, J. G., & Simon, H. A. (1958). *Organizations.* New York: Wiley.

Markus, H. R., & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review*, *98*, 224-253.

Martinko, M. J., Harvey, P., Brees, J. R., & Mackey, J. (2013). A review of abusive supervision research. *Journal of Organizational Behavior. 34,* 120-137.

Maslach, C., & Jackson, S. E. (1981). The measurement of experienced burnout. *Journal of Occupational Behavior*, *2*, 99-113.

Maslach, C., & Leiter, M. P. (2008). Early predictors of job burnout and engagement. *Journal of Applied Psychology*, *93*, 498-512.

Mayo Clinic (2013). *How many hours of sleep are good enough for health?* Retrieved October 27, 2015, from http://www.mayoclinic.org/healthy-lifestyle/adult-health/expert-answers/how-many-hours-of-sleep-are-enough/faq-20057898.

Melamed, S., Shirom, A., Toker, S., Berliner, S., & Shapira, I. (2006). Burnout and risk of cardiovascular disease: evidence, possible causal paths, and promising research directions. *Psychological Bulletin*, *132*, 327-353.

Meyer, J. P., & Herscovitch, L. (2001). Commitment in the workplace: Toward a general model. *Human Resource Management Review*, *11*, 299-326.

Mitchell, M. S., & Ambrose, M. L. (2007). Abusive supervision and workplace deviance and the moderating effects of negative reciprocity beliefs. *Journal of Applied Psychology*, *92*, 1159-1168.

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*, 1102-1121.

Mitchell, T. R., & Lee, T. W. (2001). The unfolding model of voluntary turnover and job embeddedness: Foundations for a comprehensive theory of attachment. *Research in Organizational Behavior*, *23,* 189-246.

Mobley, W. (1977). Intermediate linkages in the relationship between job satisfaction and employee turnover. *Journal of Applied Psychology*, 62, 237-240.

Ng, T. W. H., & Feldman, D. C. (2009). Age, work experience, and the psychological contract. *Journal of Organizational Behavior*, *30*, 1053-1075.

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*, 696-712.

Ng, T. W. H., & Feldman, D. C. (2012). The effects of organizational and community embeddedness on work-to-family and family-to-work conflict. *Journal of Applied Psychology*, *97*, 1233-1251.

Ng, T. W. H., & Feldman, D. C. (2013). Changes in perceived supervisor embeddedness: Effects of employees' embeddedness, organizational trust, and voice behavior. *Personnel Psychology*, *66*, 645-685.

Nolen-Hoeksema, S., McBride, A., & Larson, J. (1997). Rumination and psychological distress among bereaved partners. *Journal of Personality and Social Psychology*, *72*, 855-862.

Ono, H. (2007). Careers in foreign-owned firms in Japan. *American Sociological Review*, *72*, 267-290.

Peltokorpi, V. (2013). Job embeddedness in Japanese organizations. *The International Journal of Human Resource Management*, *24*, 1551-1569.

Peltokorpi, V., Allen, D. G., Froese, F. (2015). Organizational embeddedness, turnover intentions, and voluntary turnover: The moderating effects of employee demographic characteristics and value orientations. *Journal of Organizational Behavior, 36,* 292-312.

Pierce, J. R., & Aguinis, H. (2013). The too-much-of-a-good-thing effect in management. *Journal of Management, 39,* 313-338.

Pilcher, J. J., & Huffcutt, A. J. (1996). Effects of sleep deprivation on performance: a meta-analysis. *Sleep: Journal of Sleep Research & Sleep Medicine, 19,* 318-326.

Podsakoff, P. M., MacKenzie, S. B., Lee, J-Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology, 88,* 879-903.

Rafferty, A. E. Restubog, S. L. D., & Jimmieson, N. L. (2010). Losing sleep: Examining the cascading effects of supervisors' experience of injustice on subordinates' psychological health. *Work & Stress, 24,* 36-55.

Ramesh, A., & Gelfand, M. J. (2010). Will they stay or will they go? The role of job embeddedness in individualistic and collectivistic cultures. *Journal of Applied Psychology, 95,* 807-823.

Rubenstein, A. L., Eberly, M. B., Lee, T. W., & Mitchell, T. R. (2015). Looking beyond the trees: A meta-analysis and integration of voluntary turnover research. *Academy of Management Proceedings* (Vol. 2015, p. 12779). Academy of Management.

Saucier, G. (1994). Mini-markers: A brief version of Goldberg's unipolar Big-Five markers. *Journal of Personality Assessment*, *63*, 506-516.

Seltzer, J. & Numerof, R. E. (1988). Supervisory leadership and subordinate burnout. *Academy of Management Journal*, *31,* 439-446.

Siemsen, E., Roth, A., & Oliveira, P. (2010). Common method bias in regression models with linear, quadratic, and interaction effects. *Organizational Research Methods*, *13*, 456-476.

Sinclair, R. R., Tucker, J. S., Cullen, J. C., & Wright, C. (2005). Performance differences among four commitment profiles, *Journal of Applied Psychology*, *90*, 1280-1287.

Spector, P. E., & Jex, S. M. (1998). Development of four self-report measures of job stressors and strains: Interpersonal conflict at work scale, organizational constraints scale, qualitative workload inventory, and physical symptoms inventory. *Journal of Occupational Health Psychology*, *3,* 356-367.

Spurgeon, A., Harrington, J. M., & Cooper, C. L. (1997). Health and safety problems associated with long working hours: a review of the current position. *Occupational and Environmental Medicine*, *54*, 367-375.

Sverke, M., Hellgren, J., & Näswall, K. (2002). No security: a meta-analysis and review of job security and its consequences. *Journal of Occupational Health Psychology*, 7, 242-264.

Swider, B. W., & Zimmerman, R. D. (2010). Born to burnout: A meta-analytic path model of personality, burnout, and work outcomes. *Journal of Vocational Behavior, 76,* 487-506.

Takeuchi, R., Lepak, D. P., Wang, H., & Takeuchi, K. (2007). An empirical examination of the mechanisms mediating between high-performance work systems and the performance of Japanese organizations. *Journal of Applied Psychology*, *92*, 1069-1083.

Tepper, B. J. (2000). Consequences of abusive supervision. *Academy of Management Journal*, *43,* 178-190.

Tepper, B. J. (2007). Abusive supervision in work organizations: Review, synthesis, and research agenda. *Journal of Management*, *33*, 261-289.

Tepper, B. J., & Lockhart, D. (2005). Abused subordinates' upward maintenance communication: A coping perspective. In *Proceedings of the Annual Meeting of the Southern Management Association*, Charleston, SC.

Tett, R. P., & Burnett, D. D. (2003). A personality trait-based interactionist model of job performance. *Journal of Applied Psychology*, *88,* 500-517.

Thomsen, D. K., Mehlsen, M. Y., Christensen, S., & Zachariae, R. (2003). Rumination: relationship with negative mood and sleep quality. *Personality and Individual Differences*, *34*, 1293-1301.

Trevor, C. O., & Nyberg, A. J. (2008). Keeping your headcount when all about you are losing theirs: Downsizing, voluntary turnover rates, and the moderating role of HR practices. *Academy of Management Journal*, 51, 259-276.

Valcour, P. M., & Tolbert, P. (2003). Gender, family and career in the era of boundarylessness: determinants and effects of intra-and inter-organizational mobility. *International Journal of Human Resource Management*, *14*, 768-787.

Vogel, R. M., Mitchell, M. S., Tepper, B. J., Restubog, S. L. D., Hu, C., Hua, W., & Huang, J-C. (2015). A cross-cultural examination of subordinates' perceptions of and reactions to abusive supervision. *Journal of Organizational Behavior*, *36*, 720-745.

Waldman, D. A., Carter, M. Z., & Hom, P. W. (2015). A multi-level investigation of leadership and turnover behavior. *Journal of Management*, 41, 1724-1744.

Wasti, S. A. (2005). Commitment profiles: Combinations of organizational commitment forms and job outcomes. *Journal of Vocational Behavior*, *67*, 290-308.

World Health Statistics (2014). World Health Organization, http://www.who.int/gho/publications/world_health_statistics/2014/en/.

Yao, X., Lee, T. W., Mitchell, T. R., Burton, J. P., & Sablynski, C. S. (2004). Job embeddedness: Current research and future directions. In R. Griffeth & P. Hom (Eds.), *Understanding employee retention and turnover* (pp. 153-187), Greenwich, CT: Information Age.

Zhang, M., Fried, D., & Griffeth, R. (2012). Job embeddedness: A review of conceptualization and measurement issues. *Human Resource Management Review*, *22*, 220-231.

Table 1
Means (M), Standard Deviations (SD), and Intercorrelations among Variables (Study 1)

		M	SD	1	2	3	4	5	6
1.	Age	41.85	9.42	–					
2.	Gender (0 = female, 1 = male)	0.72	0.45	.16 **	–				
3.	Education level	3.35	1.00	-.29 **	.08 *	–			
4.	Marital status (0 = not married, 1 = married)	0.52	0.50	.25 **	.21 **	.01	–		
5.	Number of previous firms worked	1.83	2.09	.21 **	-.00	-.24 **	-.06	–	
6.	Average hours worked per week	39.06	15.88	.02	.14 **	.09 *	.07	-.01	–
7.	Tenure (present organization)	11.25	9.25	.46 **	.08 *	-.22 **	.19 **	-.37 **	.04
8.	Tenure (with present supervisor)	40.42	44.93	.16 **	-.08 *	-.13 **	.04	-.02	-.02
9.	Abusive supervision	2.02	0.83	.02	.06	-.04	-.05	.01	.01
10.	Organizational embeddedness	3.83	1.02	-.01	-.06	-.04	.11 **	-.18 **	.06
11.	Voluntary turnover (0 = stayers, 1 = leavers)	0.08	0.28	-.09 *	.02	-.03	-.04	.11 **	.00
12.	Physical health symptoms	4.12	4.02	-.01	-.24 **	-.02	-.13 **	-.01	-.04

		7	8	9	10	11
1.	Age					
2.	Gender (0 = female, 1 = male)					
3.	Education level					
4.	Marital status (0 = not married, 1 = married)					
5.	Number of previous firms worked					
6.	Average hours worked per week					
7.	Tenure (present organization)	–				
8.	Tenure (with present supervisor)	.16 **	–			
9.	Abusive supervision	.02	.05	(.97)		
10.	Organizational embeddedness	.23 **	.14 **	-.09 *	(.84)	
11.	Voluntary turnover (0 = stayers, 1 = leavers)	-.13 **	-.11 **	.10 *	-.15 **	–
12.	Physical health symptoms	-.02	.12 **	.06	-.04	-.08 *

Note. N = 597. Education level: "middle school" = 1, "high school" = 2, "vocational school/2 year university degree" = 3, "undergraduate degree (Bachelor's)" = 4, "graduate degree (Masters, Ph.D.)" = 5. Coefficient alphas are shown on the diagonal in parentheses. ** $p < .01$, * $p < .05$

Table 2
Results for Voluntary Turnover (Study 1)

	B	SE	Wald statistic		Odds Ratio	95% CI of Odds Ratio		
						LL		UL
Age	-0.04	.02	3.82	*	0.96	0.92	-	1.00
Gender (0 = female, 1 = male)	0.31	.38	0.67		1.37	0.65	-	2.89
Education level	-0.29	.17	2.96		0.75	0.54	-	1.04
Marital status (0 = not married, 1 = married)	0.24	.34	0.47		1.27	0.65	-	2.48
Number of previous firms worked	0.10	.07	1.97		1.10	0.96	-	1.26
Average hours worked per week	-0.00	.01	0.01		1.00	0.98	-	1.02
Tenure (present organization)	-0.03	.03	1.56		0.97	0.92	-	1.02
Tenure (with present supervisor)	-0.01	.01	4.59	*	0.99	0.97	-	1.00
Abusive supervision (AS)	0.22	.21	1.04		1.25	0.82	-	1.90
Organizational embeddedness (OE)	-0.37	.16	5.39	*	0.69	0.50	-	0.94
AS x OE	-0.36	.18	4.14	*	0.70	0.49	-	0.99
Model $\chi^2_{(df)}$			45.33$_{(11)}$	**				
-2 Log likelihood			298.35					
Nagelkerke R^2			.17					
Conditional effect at levels of organizational embeddedness						LL		UL
+ 1 SD	-0.10	.32	-0.31			-0.73	-	0.53
M	0.27	.20	1.33			-0.13	-	0.67
- 1 SD	0.65	.22	2.96	**		0.22	-	1.07

Note. $N = 597$. ** $p < .01$, * $p < .05$. B = unstandardized coefficient; CI = confidence interval; LL = lower limit, UL = upper limit.

Table 3
Results for Physical Health Symptoms (Study 1)

	B	SE	t		95% CI		
					LL		UL
Age	0.02	.02	0.97		-0.02	-	0.07
Gender (0 = female, 1 = male)	-2.09	.37	-5.58	**	-2.82	-	-1.35
Education level	0.06	.18	0.34		-0.29	-	0.41
Marital status (0 = not married, 1 = married)	-0.66	.34	-1.94		-1.32	-	0.01
Number of previous firms worked	-0.08	.10	-0.81		-0.27	-	0.11
Average hours worked per week	0.00	.01	0.15		-0.02	-	0.02
Tenure (present organization)	-0.01	.02	-0.46		-0.06	-	0.04
Tenure (with present supervisor)	0.01	.00	2.56	*	0.00	-	0.02
Abusive supervision (AS)	0.30	.19	1.67		-0.07	-	0.68
Organizational embeddedness (OE)	-0.15	.17	-0.92		-0.48	-	0.17
AS x OE	0.43	.18	2.34	*	0.07	-	0.80
Multiple *R*			0.31				
R²			0.10				
F			5.64	**			
Conditional effect at levels of organizational embeddedness					LL		UL
+ 1 SD	0.75	.28	2.68	**	0.20	-	1.30
M	0.30	.19	1.58		-0.07	-	0.68
- 1 SD	-0.14	.26	-0.54		-0.65	-	0.37

Note. $N = 597$. ** $p < .01$, * $p < .05$
Bootstrap sample size = 1000; B = unstandardized coefficient; CI = confidence interval; LL = lower limit, UL = upper limit.

Table 4

Means (M), Standard Deviations (SD), and Intercorrelations among Variables (Study 2)

	M	SD	1	2	3	4	5	6
1. Age	47.72	10.42	–					
2. Gender (0=female, 1=male)	0.41	0.50	-.05	–				
3. Education level	4.33	1.47	-.24 **	.06	–			
4. Marital status (0=not married, 1=married)	0.62	0.49	-.03	.12 *	.09	–		
5. Tenure (present organization)	10.24	8.49	.38 **	.07	.02	.14 *	–	
6. Neuroticism	2.14	0.76	-.22 **	-.14 *	-.04	-.13 *	-.06	(.86)
7. Abusive Supervision	1.49	0.71	-.14 *	.05	-.01	-.01	-.02	.29 **
8. Job Insecurity	2.08	1.09	-.08	.00	.09	-.09	-.15 **	.41 **
9. Organizational Embeddedness	3.81	0.71	-.03	.02	.06	.16 **	.11 *	-.41 **
10. Emotional Exhaustion	2.37	0.98	-.05	.08	.10	.07	-.01	.02
11. Employee Sleep Index	0.00	0.83	-.04	-.03	-.00	.00	.03	-.12 *

	7	8	9	10	11
1. Age					
2. Gender (0=female, 1=male)					
3. Education					
4. Marital status (0=not married, 1=married)					
5. Tenure (present organization)					
6. Neuroticism					
7. Abusive Supervision	(.96)				
8. Job Insecurity	.26 **	(.90)			
9. Organizational Embeddedness	-.31 **	-.48 **	(.89)		
10. Emotional Exhaustion	.51 **	.11 *	-.01	(.94)	
11. Employee Sleep Index	-.14 *	-.13 *	.04	-.36 **	(.66)

Note. $N = 283$. Education level: "some high school" = 1, "high school graduate or GED equivalent" = 2, "some college" = 3, "associate's degree" = 4, "bachelor's degree" = 5, "master's or professional degree" = 6, "doctoral degree" = 7. Coefficient alphas are shown on the diagonal in parentheses. ** $p < .01$, * $p < .05$

Table 5
Results for Abusive Supervision (Study 2)

	Emotional Exhaustion						Sleep Index					
	B	SE	t		95% CI		B	SE	t		95% CI	
					LL	UL					LL	UL
Age	-0.00	.01	-0.77		-0.01 -	0.01	-0.01	.01	-1.82		-0.02 -	0.00
Gender (0 = female, 1 = male)	-0.08	.10	-0.88		-0.27 -	0.11	-0.02	.10	-0.17		-0.22 -	0.18
Education level	0.09	.04	2.51	*	0.02 -	0.16	-0.04	.04	-1.13		-0.11 -	0.03
Marital status (0 = not married, 1 = married)	0.13	.10	1.30		-0.07 -	0.32	-0.03	.10	-0.33		-0.24 -	0.17
Tenure (present organization)	-0.00	.00	-0.99		-0.00 -	0.00	0.00	.00	0.92		-0.00 -	0.00
Neuroticism	0.07	.07	1.02		-0.07 -	0.21	-0.17	.08	-2.25	*	-0.32 -	-0.02
Abusive supervision (AS)	0.76	.07	11.17	**	0.63 -	0.89	-0.15	.07	-2.18	*	-0.29 -	-0.01
Organizational embeddedness (OE)	0.02	.07	0.29		-0.12 -	0.17	-0.03	.08	-0.36		-0.19 -	0.13
AS x OE	0.20	.09	2.13	*	0.01 -	0.40	0.07	.11	0.61		-0.15 -	0.29
Multiple *R*			0.57						0.21			
R²			0.32						0.04			
F			19.56	**					1.39			
Conditional effect at levels of organizational embeddedness					LL	UL					LL	UL
+ 1 SD	0.89	.10	9.03	**	0.70 -	1.09	-0.10	.11	-0.96		-0.32 -	0.11
M	0.76	.07	11.18	**	0.63 -	0.89	-0.15	.07	-2.18	*	-0.29 -	-0.01
- 1 SD	0.63	.10	5.98	**	0.42 -	0.83	-0.20	.10	-1.97	*	-0.40 -	-0.00

Note. $N = 283$. ** $p < .01$, * $p < .05$
Bootstrap sample size = 1000; B = unstandardized coefficient; CI = confidence interval; LL = lower limit, UL = upper limit.

Table 6
Results for Job Insecurity (Study 2)

	Emotional Exhaustion						Sleep Index					
	B	SE	t	95% CI			B	SE	t	95% CI		
				LL		UL				LL		UL
Age	0.00	.01	0.07	-0.01	-	0.01	-0.01	.01	-1.66	-0.02	-	0.04
Gender (0 = female, 1 = male)	-0.14	.12	-1.16	-0.38	-	0.10	-0.02	.10	-0.19	-0.22	-	0.18
Education level	0.07	.04	1.61	-0.02	-	0.15	-0.03	.04	-0.80	-0.10	-	0.04
Marital status (0 = not married, 1 = married)	0.13	.12	1.06	-0.11	-	0.37	-0.02	.10	-0.22	-0.22	-	0.18
Tenure (present organization)	-0.00	.00	-0.07	-0.00	-	0.00	0.00	.00	0.42	-0.00	-	0.00
Neuroticism	0.03	.09	0.36	-0.15	-	0.22	-0.14	.08	-1.80	-0.29	-	0.01
Job Insecurity (JI)	0.11	.07	1.63	-0.02	-	0.24	-0.13	.06	-2.23 *	-0.24	-	-0.02
Organizational embeddedness (OE)	0.06	.10	0.55	-0.15	-	0.26	-0.07	.09	-0.86	-0.24	-	0.10
JI x OE	0.03	.07	0.45	-0.11	-	0.18	-0.15	.06	-2.33 *	-0.27	-	-0.02
Multiple *R*			0.19						0.23			
R²			0.04						0.05			
F			1.19						1.68			
Conditional effect at levels of organizational embeddedness				LL		UL				LL		UL
+ 1 SD	0.13	.10	1.37	-0.06	-	0.33	-0.23	.08	-2.78 **	-0.39	-	-0.07
M	0.11	.07	1.63	-0.02	-	0.25	-0.13	.06	-2.23 *	-0.24	-	-0.02
- 1 SD	0.09	.07	1.23	-0.06	-	0.23	-0.03	.06	-0.44	-0.14	-	0.09

Note. $N = 283$. ** $p < .01$, * $p < .05$
Bootstrap sample size = 1000; B = unstandardized coefficient; CI = confidence interval; LL = lower limit, UL = upper limit.

Figure 1
Interaction between abusive supervision and organizational embeddedness predicting voluntary turnover (Study 1)
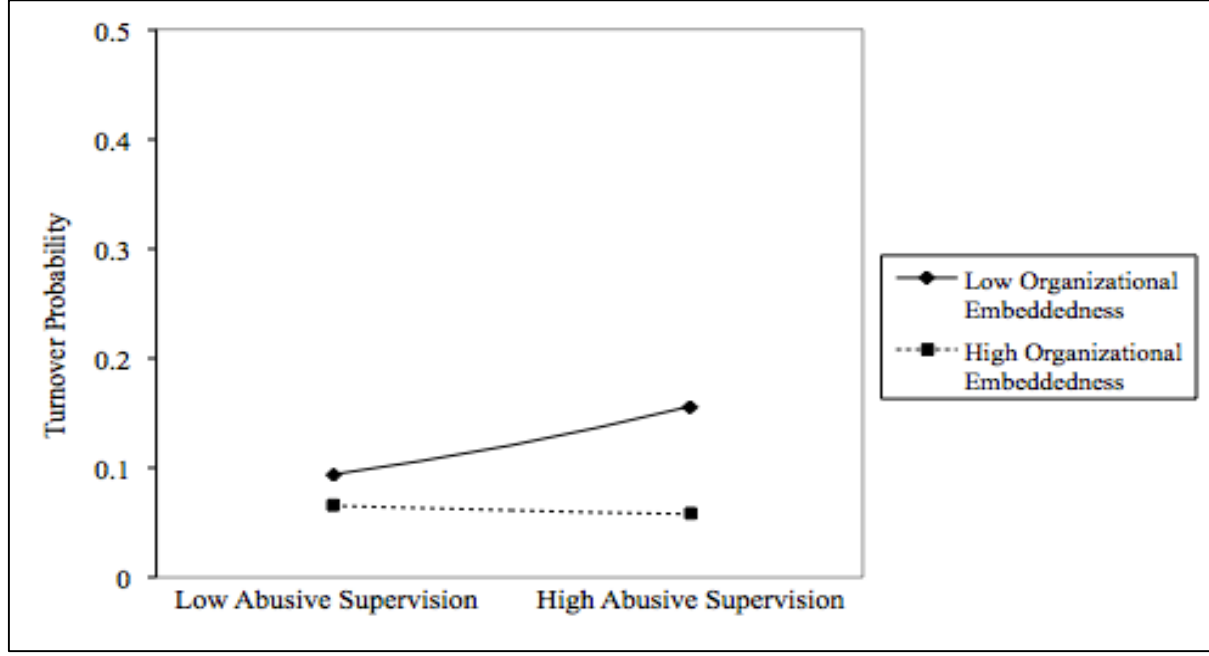

Figure 2
Interaction between abusive supervision and organizational embeddedness predicting physical health symptoms (Study 1)
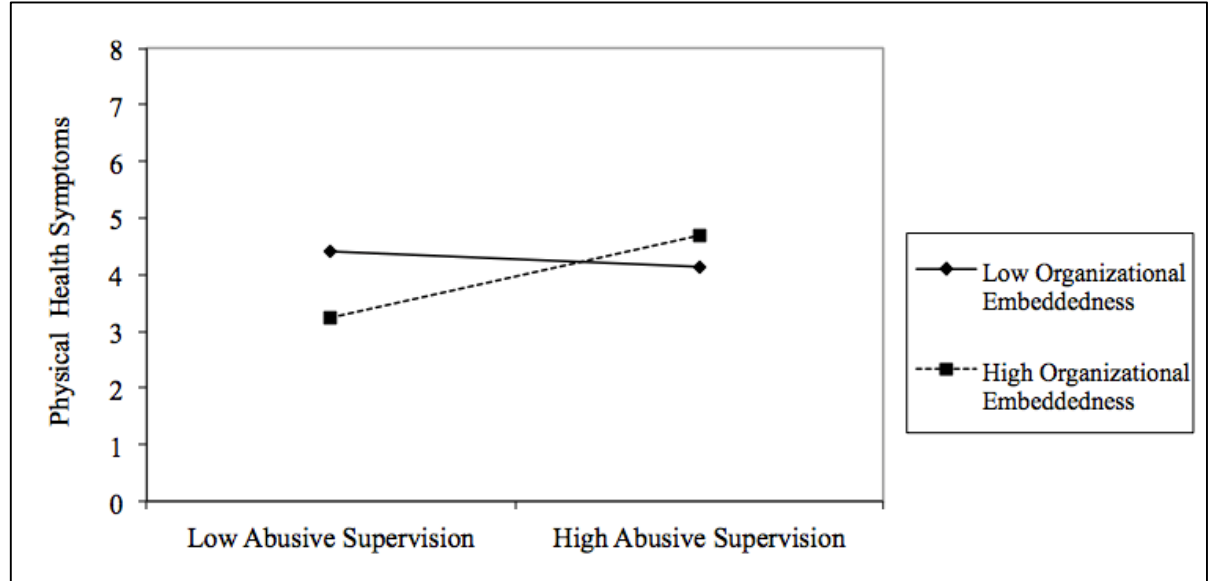
Figure 3
Interaction between abusive supervision and organizational embeddedness predicting emotional exhaustion (Study 2)
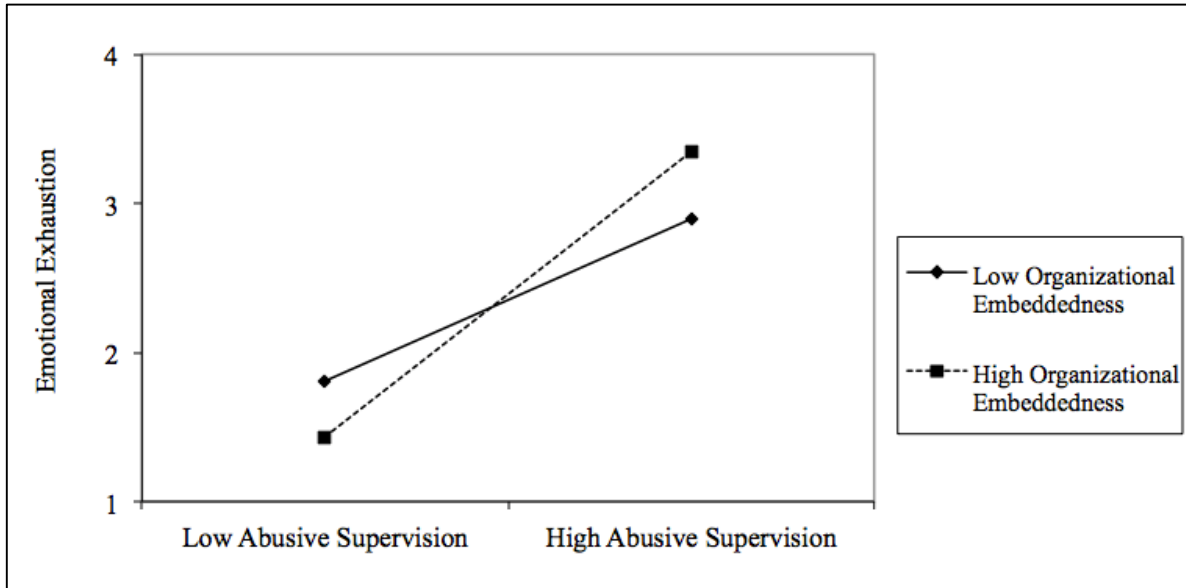

Figure 4
Interaction between job insecurity and organizational embeddedness predicting sleep (Study 2)