Job Insecurity and Innovative Work Behavior: A Moderated Mediation Model of Intrinsic Motivation and Trait Mindfulness

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Abstract

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Job Insecurity and Innovative Work Behavior: A Moderated Mediation Model of Intrinsic Motivation and Trait Mindfulness

Over the last two decades, the increased global competition and the ongoing transformations in technological, economic, and political environments have led employees to experience increased job insecurity (Shoss, 2017) – the perception and/or concern about the potential to involuntarily lose one's present job in the future (Vander Elst, Van den Broeck, De Cuyper, & De Witte, 2014). Nevertheless, the same employees that have experienced increased job insecurity are also increasingly pressured to engage in innovative work behaviors – to generate, promote and implement new and useful ideas (Janssen, 2000) – to help organizations survive and achieve a competitive advantage in such turbulent environments (Shin, Yuan, & Zhou, 2017).

Research evidence, however, suggests that insecure job perceptions and innovative behaviors do not necessarily "get along very well" with each other; rather, the former occurs at the expense of the other. Indeed, some studies have found job insecurity to impair innovative behaviors (De Spiegelaere, Van Gyes, De Witte, Niesen, & Van Hootegem, 2014; Niesen, Van Hootegem, Handaja, Battistelli, & De Witte, 2018; Niesen, Van Hootegem, Vander Elst, Battistelli, & De Witte, 2018; Probst, Chizh, Jiang, Hu, & Austin, 2020). These findings, combined with the plethora of studies documenting the detrimental effects of job insecurity on work outcomes (for recent reviews, see Lee, Huang, & Ashford, 2018; Shoss, 2017), identify a theoretically and practically relevant question: how and under what conditions can employees be enabled to innovate under perceived insecure job conditions? Unfortunately, due to the scant research attention devoted to the relationship between job insecurity and innovative work behavior, evidence-based answers to this question are lacking. Indeed, despite providing evidence for the negative effects of job insecurity on innovation-

related behaviors, prior studies have not paid sufficient attention to the processes and boundary conditions associated with such effects.

The present study aims to address these important research gaps by relying on the insights from job demands-resources (JD-R; Bakker and Demerouti, 2017) theory and self-determination theory (SDT; Deci & Ryan, 2000) to understand the "how" and "when" of the job insecurity–innovative work behavior relationship. Combining these theoretical perspectives, we develop and test a first-stage moderated mediation model that identifies the following: a) intrinsic motivation – the enactment of activities for the experienced pleasure or inherent interest (Ryan & Deci, 2000) – as a mediating process underlying a negative relationship between job insecurity and innovative work behavior, and b) trait mindfulness – the individual disposition to be attentive to and aware of the experiences that occur in the present moment (Brown & Ryan, 2003) – as a personal resource that moderates (i.e., buffers) this mediated relationship.

The present study is expected to contribute to prior stream of research that addressed the "how" and "when" questions of the job insecurity–innovation relationship (Lee et al., 2018; Shoss, 2017). The study provides a motivational approach that identifies intrinsic motivation as a key mechanism explaining the impact of job insecurity on innovative behavior and mindfulness as an individual resource shaping the strength of this motivational path. Thus, our study provides a new theoretical lens to understand the processes and boundary conditions associated with the impact of job insecurity on employee innovativeness. Moreover, stressful work conditions have been recognized as important impediments to innovation-related behaviors (Fay, Bagotyriute, Urbach, West, & Dawson, 2017). However, as previously discussed, only a few studies have actually examined the impact of job insecurity on innovative behaviors, thus leaving the issue of how employees exposed to insecure jobs can counteract such a stressful condition that they do not have any control over

unresolved. Our motivational model of job insecurity discloses the role of trait mindfulness as an individual-based resource that is expected to keep the motivational fire burning despite the presence of insecure job conditions and thus maintain innovative work behavior for the first time. By examining the moderating impact of trait mindfulness, our study also extends the current knowledge of the benefits of this individual characteristic at work. Indeed, to date, mindfulness has been primarily examined as a direct determinant of work outcomes (Good et al., 2016). We move a step further by clarifying its role as a protective factor for intrinsic motivation and innovative behavior against job insecurity for the first time. Figure 1 depicts our conceptual model, which is developed in the sections below.

[Figure 1 about here]

Theory and Hypotheses

Job insecurity and Innovative Work Behavior: Combining the JD-R and SDT Perspectives

JD-R theory (Bakker & Demerouti, 2017) and SDT (Deci & Ryan, 2000) provide important insights that, combined, help to understand how employees can be more able to access the energetic resources needed to innovate. SDT uniquely suggests that the reason why constraining job conditions impair the quality of motivation, which is a crucial determinant of adaptive functioning (Fernet, Austin & Vallerand, 2012; Gagné & Deci, 2005). More precisely, according to SDT, the impairing effects of job demands would be explained by a drop in employees' autonomous motivation (i.e., acting volitionally and with coherence with one's self), whose highest form is intrinsic motivation (Ryan & Connell, 1989; Ryan & Deci, 2000). This principle is in line with the challenge-hindrance model of stress, which classifies job demands into challenge stressors and hindrance stressors based on their different effects on work motivation (LePine, Podsakoff, & LePine, 2005). Challenge stressors, such as workload and time pressure, are demands that motivate task performance by providing

opportunities for personal gains, growth or development; conversely, hindrance stressors, such as job insecurity, are demands that constrain personal growth, development and achievements and thus are associated with lower levels of work motivation (LePine et al., 2005). In this instance, the JD-R perspective contends that personal resources – the characteristics or aspects of the self that refer to the individuals' ability to control and impact successfully upon their environment (Bakker & Demerouti, 2017) – play a key role in buffering the energy-thwarting impact of job demands (Schaufeli & Bakker, 2004).

Thus, taken together, the insights from the SDT and JD-R perspectives help to understand *why* employees might be unable to innovate under insecure job conditions and *when* the innovative potential can be preserved among such employees. Consistent with these theoretical premises, we incorporate SDT and JD-R theory into a unified moderated mediation framework to explain the processes and boundary conditions associated with the effects of job insecurity on innovative work behavior. In the next two sections, we elaborate on the mediating role of intrinsic motivation in linking job insecurity with innovative behavior and on the moderating role of trait mindfulness in attenuating the negative effects of job insecurity on intrinsic motivation and, indirectly, innovative work behavior.

Mediating Role of Intrinsic Motivation

Intrinsic motivation refers to the desire to expend effort on a given task based on an interest in and enjoyment of the task itself (Gagné & Deci, 2005; Ryan & Deci, 2000). Intrinsic motivation shares a functional similarity with work engagement, a motivational state characterized by vigor, dedication, and absorption (Schaufeli, Salanova, González-Romá, & Bakker, 2002), which has been previously found to account for a negative relationship between job insecurity and innovative work behavior (De Spiegelaere et al., 2014). Precisely, both constructs provide the energizing potential necessary to engage in change-oriented behaviors (Salanova & Schaufeli, 2008). However, intrinsic motivation differs from work

engagement in terms of the specific components that underlie one's motivational state. Indeed, while work engagement represents the general feeling of energy and fulfillment in the execution of one's work duties (i.e., the "what" component of motivation), intrinsic motivation is more focused on the sources (or reasons) that drive such positive, energetic responses (i.e., the "why" component of motivation). Thus, our study emphasizes the "why" component of one's motivation as a key process linking job insecurity and innovative behavior.

Consistent with JD-R theory and SDT, we argue that exposure to perceived insecure job conditions would thwart the level of intrinsic motivation that is necessary to be involved in innovative behaviors. More precisely, job insecurity represents a forced and aversive situation that individuals are unlikely to change (Sverke & Hellgren, 2002). As such, it reduces an individual's feelings of volition and of internal causality that are at the heart of intrinsic motivation. Moreover, job insecure employees have limited knowledge about whether and how their work will change in the future, thus being unable to undertake actions that enable them to affect the evolution of their job condition (De Witte, 1999). As a result, such people would be prevented from experiencing high levels of intrinsic motivation (Fernet et al., 2016). Furthermore, as a job demand that thwarts individual growth and gain, job insecurity threatens employees' capacity to achieve self-valued and personally important goals through their work efforts (Wang, Lu & Lu, 2014). As such, insecure employment situations inherently preclude the possibility for employees to stay intrinsically motivated in the pursuit of their work activities (Ryan & Deci, 2000).

The lower feelings of intrinsic motivation elicited by insecure job conditions, in turn, are expected to undermine employees' innovative functioning. Indeed, low intrinsically motivated employees tend to be less curious and have a weak preference for relatively complex tasks (Koestner, Zuckerman, & Koestner, 1987). As a result, such people would be

less likely to access diverse and important information, attempt to resolve problems from a variety of perspectives, examine different environments, and identify and test various alternatives, thus being less capable of developing and implementing novel ideas (Amabile, 1996). Moreover, by reducing work efforts, low intrinsic motivation prevents employees from striving to face adversities or obstacles to idea promotion and implementation (Pychyl, Lee, Thibodeau, & Blunt, 2000). Indirect support for this line of reasoning is provided by prior studies showing that job insecurity is associated with impaired employee functioning – higher counterproductive work behavior (Van den Broeck et al., 2014) and lower well-being (Vander Elst, Van den Broeck, De Witte, & De Cuyper, 2012) – via psychological need frustration – a proximal determinant of intrinsic motivation (Deci & Ryan, 1995). Moreover, intrinsic motivation has been found to mediate a negative relationship between abusive supervision, which represents a key energy-draining condition (Li, Wang, Yang, & Liu, 2016), and employee creativity (Zhang, Kwan, Zhang, & Wu, 2014). Hence, we propose the following:

Hypothesis 1: Intrinsic motivation will mediate a negative relationship between job insecurity and innovative work behavior.

Moderating Role of Trait Mindfulness

Following JD-R theory, personal resources that help people deal effectively with demanding conditions may prevent the thwarting effect of job insecurity. Supporting these assumptions, research has suggested that the ability to cope with job demands is influenced by individual difference variables (LePine et al., 2005). However, from an SDT perspective, the impairing effect of job insecurity on employee innovative behavior is expected to be transmitted by intrinsic motivation. Accordingly, the integration of the JD-R and the SDT approaches suggests that in order to understand how the innovation-impairing consequences of job insecurity can be offset, it is relevant to identify those personal resources that are uniquely positioned to influence the motivational potential of employees exposed to

demanding situations. Consistent with this theoretical rationale, and building on theoretical and empirical advances on mindfulness, we contend that mindfulness would attenuate the undermining effect of job insecurity on intrinsic motivation and, ultimately, innovative behavior. In the present study, mindfulness is conceptualized and operationalized as a stable dispositional tendency that varies across people rather than as a state that can fluctuate within individuals (Brown & Ryan, 2003).

High levels of trait mindfulness interrupt automatic conditioned reactions, thus enabling a conscious reflection that allows insecure employees to re-evaluate the context in which initial appraisals of job insecurity are made (Teasdale & Chaskalson, 2011). As a result, mindful employees are provided with a larger "psychological space" for accessing new perspectives that allow them to constructively reframe their insecure job situation as an opportunity for personal growth and development (Garland, Farb, Goldin, & Fredrickson, 2015). In this condition, even if they feel insecure, employees can perceive that such a job is not discordant or incompatible with the self (Deci & Ryan, 1995, 2000), which is essential to keep intrinsic motivation alive (Deci & Ryan, 2000; Rosso, Dekas, & Wrzesniewski, 2010). For the same reason, mindful employees might feel more confident in their ability to exert control over their adverse condition and to achieve goals (Duggleby, Cooper, & Penz, 2009). As a result, mindful employees will be nonetheless protected against the draining effect of their job uncertainty (Werner & Smith, 1992) and, consequently, will be prevented from experiencing lower intrinsic motivation (Deci & Ryan, 2000).

Conversely, since they are less able to decenter from the automatic and negative response patterns (thoughts and feelings) related to job insecurity, low mindful employees would ruminate these concerns, remaining imprisoned in such reactions (Shapiro, Brown, & Biegel, 2007). As a result, job insecure and low mindful employees would have limited chances to preserve their intrinsic motivation and innovative behavior. Supporting our

arguments, trait mindfulness has been found to buffer employees from perceptions of organizational injustice (Long & Christian, 2015) – a strong correlate of job insecurity – and from stressful job conditions (Grover, Teo, Pick, & Roche, 2017) – a key feature of job insecurity. In line with previous research and the above reasoning, we therefore hypothesize the following.

Hypothesis 2: Trait mindfulness will moderate the negative relationship between job insecurity and intrinsic motivation such that this relationship will be weaker (vs. stronger) when trait mindfulness is high (vs. low).

Hypothesis 3: Trait mindfulness will moderate the negative indirect relationship between job insecurity and innovative work behavior through intrinsic motivation such that this indirect relationship will be weaker (vs. stronger) when trait mindfulness is high (vs. low).

Overview of the Studies

According to Hochwarter, Ferris, and Hanes (2011), research involving multiple studies makes relevant contributions via replication and extension. Similarly, Cortina, Aguinis, and DeShon (2017) recently recommended testing theoretical models, or a portion of them, through improved, or at least different, independent empirical attempts. Following the replication–and–extension approach recommended by these methodologists, we conducted two time-lagged studies to test our hypotheses and used a three-month time lag between measurements to reduce common method bias (Podsakoff, MacKenzie, & Podsakoff, 2012). In Study 1, we adopted a two-wave design with job insecurity and trait mindfulness measured at Time 1 and the mediator (i.e., intrinsic motivation) and the dependent variable (i.e., innovative work behavior) assessed at Time 2. In Study 2, we adopted a three-wave design with job insecurity and trait mindfulness measured at Time 1, intrinsic motivation measured at Time 2, and innovative work behavior measured at Time 3.

Study 1

Method

Sample and Procedure

We surveyed employees working in French-Canadian firms from a variety of industries (i.e., architecture and design, communication and marketing, leisure, and technology). Upon agreeing to participate in the study, the firms' executives sent an email to their employees on behalf of the researchers that asked them to complete an online survey on their job conditions and innovation in two separate time periods. The introductory message described the study goals, stated that responses would be confidential, and provided a hyperlink to the first survey. The responses to the questionnaires were matched across time using an anonymous code created by the respondents at Time 1. At Time 1, 458 employees were contacted, and 347 completed the online survey. Of these, 115 did not enter the requested anonymous code, which yielded a sample of 232 individuals who were contacted for the Time 2 survey. Among them, 94 did not respond or provided incomplete responses, resulting in a final sample of 138 employees with matched data across time for an overall response rate of 30.13%. Time 2 employees did not differ from those who participated only at Time 1 on job insecurity ($t_{[272]} = -1.79$, *ns*) and mindfulness ($t_{[272]} = -1.03$, *ns*). The demographics of participants in this sample were 51% were female, the average age was 32.97 years ($SD = 7.94$), the average organizational tenure was 3.93 years ($SD = 3.80$), and 58% had at least an undergraduate degree.

Measures

Job insecurity. Job insecurity was measured using the 4-item scale developed by Vander Elst, De Witte, and De Cuyper (2014). Since a French version of the scale was not available when the data for the preset study were collected, this instrument was translated from English to French using the translation and back-translation procedure recommended by

Brislin (1981). The respondents were asked to indicate the option that best corresponded to their opinion about their job condition on a scale ranging from 1 (*totally disagree*) to 5 (*totally agree*) A sample item is "I feel insecure about the future of my job". The reliability of this scale was .70.

Trait mindfulness. We adopted the French version (Jermann et al., 2009) of Brown and Ryan's (2003) Mindful Attention Awareness Scale (MAAS) to assess trait mindfulness. Unlike other scales developed for use in clinical contexts (e.g., Walach et al., 2006), the MAAS measures trait mindfulness across a wider range of domains, including the work context (Dane & Brummel, 2013). Participants were asked to indicate the extent to which each of the 15 statements reflected their own experience on a scale ranging from 1 (*almost always*) to 5 (*almost never*). Sample items include "I find it difficult to stay focused on what's happening in the present" and "I find myself doing things without paying attention". The reliability of this scale was .73.

Intrinsic motivation. Intrinsic motivation was measured using the 3-item subscale from the French version of the Multidimensional Work Motivation Scale (Gagné et al., 2015). Participants were asked to indicate the degree to which each of 3 statements corresponded to one of the reasons for which they put efforts into their current job on a scale ranging from 1 (*not at all*) to 5 (*completely*). A sample item is "[I put efforts in this job…] because what I do in my work is exciting". The reliability of this scale was .85.

Innovative work behavior. Innovative work behavior was measured with the French translation (Montani, Dagenais-Desmarais, Giorgi & Grégoire, 2018, Sample 1) of Janssen's (2000) 9-item scale, which assesses the frequency with which employees report being involved in the generation (e.g., "Creating new ideas for difficult issues"), promotion (e.g., "Acquiring approval for innovative ideas") and realization (e.g., "Introduced innovative ideas into the work environment in a systematic way") of new ideas in the workplace. Responses

were rated on a 5-point scale ranging from 1 (*never*) to 5 (*always*). The reliability of this scale was .92.

Control variables. Previous research has shown that age, gender, education, and organizational tenure are likely to be associated with innovative work behavior (Hammond, Neff, Farr, Schwall, & Zhao, 2011). Consistent with these findings, the empathizing-systemizing theory (Baron-Cohen, Knickmeyer, & Belmonte, 2005) emphasizes gender differences in creative thinking based on core differences in the cognitive styles of males (i.e., characterized by a more analytical and systemizing style) and females (i.e., characterized by a more pronounced empathizing style). Likewise, age, educational level and organizational tenure reflect domain-relevant experiences, knowledge, expertise and skills that, according to the componential theory of creativity (Amabile, 1983), represent a core determinant of individuals' capacity to produce new ideas. Moreover, we controlled for the mediating role of work engagement (9 items; Schaufeli, Bakker, & Salanova, 2006) in the (moderated) indirect relationship between job insecurity and innovative work behavior, since, according to JD-R theory, this mechanism accounts for the effects of stressful job conditions on work-related behaviors (Bakker & Demerouti, 2017).

Results

Confirmatory Factor Analysis and Assessment of Common Method Bias

We examined the discriminant validity of the substantive variables of our study using confirmatory factor analysis (CFA) via Mplus 7.11 (Muthén & Muthén, 1998-2015). However, given the large number of items (31 items) for this analysis compared to the low sample size ($N = 138$), we applied the item parceling technique to the items of the trait mindfulness, the work engagement and the innovative work behavior scales (Little, Cunningham, Shahar, & Widaman, 2002). Specifically, following Little et al.'s (2002) recommendation, we first conducted a one-factor CFA for each construct and then created

three parallel parcels (indicators) per latent factor by combining items with higher factor loadings with those with lower factor loadings. The hypothesized five-factor model displayed a good fit to the data (χ^2 [94] = 134.50, CFI = .96, RMSEA = .06, SRMR = .06) and outperformed both a four-factor model combining work engagement and intrinsic motivation (χ^2 [98] = 219.25, CFI = .87, RMSEA = .09, SRMR = .07; $\Delta\chi^2$ [4] = 84.75, $p < .01$) and a one-factor model (χ^2 [104] = 606.58, CFI = .48, RMSEA = .19, SRMR = .13; $\Delta\chi^2$ [10] = 472.08, $p < .01$).

However, because intrinsic motivation, work engagement and innovative work behavior were measured at the same time by the same source, the hypothesized relationship between these variables could be inflated by common method variance. Accordingly, we used the unmeasured latent method factor technique (Podsakoff et al., 2012) to examine this issue within CFA. This approach is recommended when the specific source of method bias is unknown or cannot be measured (Williams, Cote, & Buckley et al., 1989), as in the present study. The CFA model for intrinsic motivation and innovative work yielded a better fit to the data after the inclusion of the method factor ($\Delta\chi^2$ [9] = 21.13, $p < .01$). However, the method factor explained 24.17% of the total variance, which is not higher than the median amount of method variance (25%) observed in self-report research (Podsakoff et al., 2012; Williams et al., 1989). Therefore, although common method bias cannot be fully ruled out, it is unlikely to invalidate our study's findings. Table 1 provides the descriptive statistics, correlations and reliability estimates for the study variables.

[Table 1 about here]

Hypothesis Testing

Table 2 provides the results of the (moderated) multiple regression analyses predicting intrinsic motivation and innovative work behavior and provides the information necessary to test Hypotheses 1-3. Hypothesis 1 predicted that intrinsic motivation would mediate a

negative relationship between job insecurity and innovative work behavior. As Table 2 shows, job insecurity was negatively related to both intrinsic motivation ($B = –.35$, $p < .05$, Model 1) and work engagement ($B = –.25$, $p < .05$, Model 4). Moreover, Table 2 (Model 7) shows that intrinsic motivation was positively related to innovative work behavior ($B = .20$, $p < .01$) whereas work engagement was not significantly associated with innovative work behavior ($B = .22$, *ns*). To determine whether job insecurity was indirectly related to innovative work behavior through reduced intrinsic motivation, we adopted the Monte Carlo method technique with 20,000 resamples with replacement of the original data and obtained 95% bias-corrected confidence intervals (CIs) for the estimates of these effects (Preacher, & Selig, 2012). The results of these analyses indicate that the indirect negative effect of job insecurity on innovative work behavior through intrinsic motivation was significant (–.07; CI = – .15, –.01), thus fully supporting Hypothesis 1.

[Table 2 about here]

Hypothesis 2 stated that trait mindfulness would moderate the negative relationship between job insecurity and intrinsic motivation such that this relationship would be weaker at high levels of trait mindfulness. Following Aiken and West (1991), all continuous variables were centered before entering them into the regression models. In line with Cohen and Cohen's (1983) recommendations, controls and job insecurity were entered in Step 1, trait mindfulness was entered in Step 2, and the interaction term between job insecurity and trait mindfulness was introduced at Step 3. As shown in Table 2, job insecurity significantly interacted with trait mindfulness in predicting intrinsic motivation ($B = .90$, $p < .05$, Model 3) but not in predicting work engagement ($B = .32$, *ns*, Model 6). This interaction is graphically represented in Figure 2. A simple slope test (Aiken & West, 1991) showed that job insecurity was negatively and significantly related to intrinsic motivation when trait mindfulness was low ($B = –.66$, $p < .01$) but was unrelated to intrinsic motivation when trait mindfulness was

high (*B* = .08, *ns*). Moreover, we probed this interaction using the Johnson-Neyman technique (see Gardner, Harris, Li, Kirkman, & Mathieu, 2017), which helps detect the specific "regions of significance" of trait mindfulness where the relationship between job insecurity and intrinsic motivation is significantly different from zero. The results showed that when the level of trait mindfulness is below .01 (i.e., the lower 47%), a significantly negative relationship between job insecurity and intrinsic motivation emerged. When the level of trait mindfulness was above .01 (i.e., the upper 53%), this relationship was not significantly different from zero. Taken together, these findings support Hypothesis 2.

[Figure 2 about here]

Finally, Hayes's (2012) PROCESS macro was used to test Hypothesis 3, which predicted that trait mindfulness would moderate the negative indirect relationship between job insecurity and innovative work behavior via intrinsic motivation. Based on 20,000 Monte Carlo replications, we estimated the bias-corrected 95% CIs for these conditional indirect effects. Consistent with our predictions, the conditional indirect effect of job insecurity on innovative work behavior was significantly negative when trait mindfulness was low (–.14; CI = –.32, –.01) but was nonsignificant when trait mindfulness was high (.02; CI = –.08, .13). Therefore, these results support Hypothesis 3. As a robustness check, we tested again the hypothesized patterns of relationships without the inclusion of control variables. Comparison between our hypotheses tests with and without control variables yielded identical results: intrinsic motivation significantly mediated a negative relationship between job insecurity and innovative work behavior (indirect effect = –.10; CI = – .21, –.01), and this negative indirect effect was significant at low (–.19; CI = – .35, –.07) but not high (.00; CI = – .09, .14) levels of mindfulness.

Study 2

Method

Sample and procedure

In Study 2, we adopted a three-wave time-lagged design in which job insecurity and trait mindfulness were measured at Time 1, intrinsic motivation was measured at Time 2, and innovative work behavior were measured at Time 3. We established a three-month interval to test the results across time. Participants were recruited through Prolific Academic, an online crowdsourcing research platform that allows researchers to recruit subjects for applied and experimental research projects from a large and diverse workforce. Research has demonstrated that the reliability and diversity of the data collected through these online platforms are at least comparable to those obtained via traditional approaches (e.g., Cheung, Burns, Sinclair, & Sliter, 2017). In addition, prior research has used panel data to examine the effects of job insecurity in the workplace (e.g., Jiang, Hu, Näswall, López Bohle, & Wang, 2020). Moreover, recent results have indicated a higher level of naivety (i.e., unfamiliarity with commonly used research materials) and a lower propensity to engage in untruthful behaviors among Prolific Academic users than the users of alternative, renowned online platforms such as CrowdFlower and Mechanical Turk (Peer, Brandimarte, Samat, & Acquisti, 2017). The respondents were paid $1.60 at each time point upon completion of the survey questionnaire.

The participants were employees working in a wide range of U.S. industries (e.g., education, finance, manufacturing, wholesale and retail). As in Study 1, the participants generated their own anonymous code to allow researchers to match their responses across time. At Time 1, we received completed responses from all employees that were contacted (N = 400). At Time 2, we obtained 264 returned questionnaires, 13 of which containing missing information. Accordingly, we contacted 251 participants to complete the survey at Time 3. Among them, 163 answered the Time 3 questionnaire, but 6 participants did not enter the anonymous code. Thus, the final sample included 157 employees (response rate = 39.25%)

with matched data across time. The respondents were 33.60 years old on average (*SD* = 10.19), 61.10% of them were male, and 76.40% were high school graduates or higher. Moreover, they had an average organizational tenure of 4.85 years (*SD* = 4.53).

Measures

We used the same scales as in Study 1 to measure job insecurity (4 items, α = .86) trait mindfulness (15 items, α = .87), intrinsic motivation (3 items, α = .91) and innovative work behavior (9 items, α = .93). As in Study 1, we controlled for age, gender, educational level, organizational tenure, and work engagement.

Results

Confirmatory Factor Analysis

As in Study 1, we conducted confirmatory factor analysis (CFA) to examine the discriminant validity of the study variables. Again, given the large number of items (31 items) for this analysis compared to the low sample size (*N* = 157), we parceled the items of the trait mindfulness and the innovative work behavior scales by creating three parcels per latent variable (Little et al., 2002). The hypothesized five-factor model fit the data well (χ^2 [94] = 139.94, CFI = .97, RMSEA = .06, SRMR = .05) and fit the data better than either a four-factor model combining intrinsic motivation and work engagement (χ^2 [98] = 149.64, CFI = .97, RMSEA = .06, SRMR = .05; $\Delta\chi^2$ [4] = 9.7, $p < .05$) or a one-factor model (χ^2 [104] = 989.43, CFI = .51, RMSEA = .23, SRMR = .19; $\Delta\chi^2$ [10] = 839.79, $p < .01$). These results thus suggest that the study variables are distinguishable. The descriptive statistics, correlations and reliability estimates for the study variables are shown in Table 1.

Hypothesis Testing

We used the same analytical procedure as in Study 1 to test Hypotheses 1-3. The results of (moderated) multiple regression analyses predicting intrinsic motivation and innovative work behavior are shown in Table 2. Job insecurity was negatively associated with

both intrinsic motivation ($B = –.24$, $p < .05$, Model 1) and work engagement ($B = –.21$, $p < .05$, Model 4). In turn, intrinsic motivation was positively related to innovative work behavior ($B = .32$, $p < .05$, Model 7) whereas work engagement did not significantly predict innovative work behavior ($B = .13$, *ns*, Model 7). As in Study 1, we used the Monte Carlo technique with 20,000 resamples with replacement of the original data to estimate the indirect relationship between job insecurity and innovative work behavior via intrinsic motivation. The results reveal that this indirect relationship was significant (–.08; CI = – .17, –.01), thereby supporting Hypothesis 1. We then examined the moderating effect of trait mindfulness on the negative relationship between job insecurity and intrinsic motivation (Hypothesis 2). The results show that job insecurity significantly interacted with trait mindfulness to predict both intrinsic motivation ($B = .32$, $p < .05$, Model 3) and work engagement $B = .24$, $p < .05$, Model 6). The results from a simple slope test further indicated that the relationship between job insecurity and intrinsic motivation was negative and significant when trait mindfulness was low ($B = –.42$, $p < .01$) but it became nonsignificant when trait mindfulness was high ($B = –.05$, *ns*) (see Figure 2). The results from the Johnson-Neyman analysis revealed that when the level of trait mindfulness was below .14 (i.e., the lower 52%), a significantly negative relationship between job insecurity and intrinsic motivation emerged. When the level of trait mindfulness was above .14 (i.e., the upper 48%), this relationship was not significantly different from zero. Hypothesis 2 was thus supported.

Finally, using Hayes's (2012) PROCESS macro, we examined whether the negative indirect relationship between job insecurity and innovative work behavior via intrinsic motivation was moderated by trait mindfulness (Hypothesis 3). The results from the estimation of bias-corrected 95% CIs on 20,000 Monte Carlo replications showed that the conditional indirect effect of job insecurity on innovative work behavior was negative and significant when trait mindfulness was low (–.13, CI = –.26, –.04) but it turned nonsignificant

when trait mindfulness was high (–.02, CI = –.12, .07). Hypothesis 3 was thus supported. As for Study 1, hypotheses were retested without including control variables, and a similar pattern of results emerged: the negative relationship between job insecurity and innovative work behavior was significantly mediated by intrinsic motivation (indirect effect = –.10; CI = – .19, –.02), and this negative indirect path was significant at low (–.17; CI = – .29, –.06) but not high (–.04; CI = – .14, .08) levels of mindfulness[1].

Discussion

As perceptions of job insecurity have become increasingly prevalent in the modern workforce and because research has documented its detrimental effects on work-related outcomes, it is important to develop and test theoretical models that help to explain why, how and under what conditions employee effective functioning can be preserved under perceived insecure job conditions. The present study addressed this issue by shedding new light onto the mediating processes and boundary conditions associated with the effects of job insecurity on employee innovative behavior, a work outcome that has received limited attention in the job insecurity literature despite its recognized importance for organizational performance and competitiveness (Gong, Huang, & Farh, 2009). Consistent with our predictions, we found that job insecurity negatively affected innovative work behavior indirectly by reducing employees' intrinsic motivation and that these effects were absent among high mindful employees than among low mindful employees. Importantly, our results indicated that job insecurity predicted work engagement in Studies 1 and 2 and that trait mindfulness moderated the job insecurity–work engagement path in Study 2. However, work engagement was unrelated to innovative work behavior in both studies. These results thus provided evidence for the (conditional) mediating role of intrinsic motivation in the job insecurity–innovative work behavior relationship above and beyond work engagement.

Theoretical implications

This study makes a number of important contributions to the literature. First, we extend the current understanding of the mechanisms linking job insecurity with impaired employee functioning. Indeed, while job insecurity research has largely disclosed the direct and moderated effects of job insecurity on work outcomes, the processes underlying these effects remained largely unexplored. Adopting a "process lens" is nonetheless essential to understand the core psychological reactions that need to be safeguarded to help employees maintain positive functioning under insecure conditions (Lee et al., 2018). Our study answers recent calls to apply such a process focus to the study of job insecurity by providing evidence for a motivational model that explains the detrimental effects of job insecurity on innovative work behavior in light of the mediating role of reduced intrinsic motivation. Thus, our research extends the current literature on the effects of stressful job conditions on innovative behavior.

Second, one key and unique contribution of our study is the identification of trait mindfulness as an individual resource that buffers employees against the demotivating effects of job insecurity and thus allows them to stay intrinsically motivated and innovative. Our results suggest that high mindful individuals can still preserve an intrinsic interest and pleasure in the execution of their job, even if the job is perceived as insecure. As such, they can maintain their motivational fire and, consequently, invest their energy in the execution of innovative behaviors. This finding extends the literature on motivation and innovation at work, which, to date, has mostly focused on the work conditions that enhance employee intrinsic motivation and, ultimately, innovative behaviors (Liu et al., 2016) but disregarded the conditions that help employees to remain motivated and innovative when they face unfavorable job conditions. We extend the prior research in this domain by showing for the first time that trait mindfulness can protect the intrinsic motivation and innovative behavior of employees exposed to a specific adverse job condition, namely, job insecurity.

Finally, our moderation and moderated mediation findings have important implications for the research on mindfulness, motivation and innovation in the workplace. Indeed, based on SDT, scholars have theoretically emphasized the key role of mindfulness in promoting a self-determined functioning, which lies at the core of intrinsic motivation (Brown & Ryan, 2003). However, the contribution of mindfulness to intrinsic motivation had yet to be empirically examined. Likewise, scholars have called for more research exploring the impacts of mindfulness on creativity and innovation since these work outcomes have received limited attention to date (Hyland, Lee, & Mills, 2015). Prior to our investigation, a few studies have examined trait mindfulness as a boundary condition associated with the effects of distress reactions and the underlying stressful conditions on employee innovative behavior (Authors A, blinded for review; Authors B, blinded for review). Precisely, Authors A (blinded for review) showed that high mindful employees were more likely to innovate than their less mindful counterparts in response to low-activated negative affect (i.e., a typical emotional distress reaction). Moreover, Authors B (blinded for review) found that moderate workload was related to increased work engagement and, indirectly, innovative work behavior among employees reporting high levels of trait mindfulness. Our study extends the prior work on mindfulness and innovation by showing that trait mindfulness can also help insecure people preserve a high level of intrinsic motivation, which is a crucial requirement for effective innovation under uncertain job conditions.

Interestingly, our findings revealed that trait mindfulness was unrelated to intrinsic motivation in both studies. Trait mindfulness was also unrelated to innovative work behavior in Study 1 and, surprisingly, was negatively related to it in Study 2. Accordingly, our results suggest that the primary way through which trait mindfulness promotes intrinsic motivation and innovative work behavior is by protecting them against energy-thwarting job conditions. However, these findings also suggest that trait mindfulness might not always be beneficial to

intrinsic motivation and innovation, thereby highlighting the importance of conducting further research to investigate the conditions upon which trait mindfulness might make employees more or less motivated and innovative at work.

Practical Implications

From a practical perspective, employees' willingness to engage in innovative work behavior is essential for an organization to reach its innovative potential and, thereby, achieve a competitive advantage. Our results suggest three pathways through which managers and organizations can maintain their members' involvement in innovative behaviors when facing adverse, insecure job conditions. First, our finding that job insecurity leads to reduced innovative work behavior provides additional evidence to prior research documenting the detrimental consequences of insecure conditions for employees' capacity to show their innovative potential at work. As such, this result implies that organizations expecting and requiring their employees to create new ideas, exert social efforts to obtain approval for ideas and, ultimately, put ideas into practice should take actions to reduce their own experience of job insecurity.

Second, our results indicate that the negative impact of job insecurity on innovative work behavior occurred only through diminished intrinsic motivation. Accordingly, this finding suggests that an important aspect of employee functioning that should be monitored and possibly surveyed by managers is the degree of intrinsic motivation that employees experience when being exposed to insecure job conditions. Such information will indeed provide useful feedback regarding the extent to which employees experience their work activity as inherently interesting or enjoyable. Finally, our results reveal that among job insecure employees, those who report high levels of trait mindfulness experience decreased intrinsic motivation and, ultimately, innovative behavior. Accordingly, an important practical

implication of this study is that managers can take steps to promote and encourage employee mindfulness in order to counteract the harmful effects of job insecurity.

Limitations and Directions for Future Research

Despite the contributions of this study, there are several noteworthy limitations. First, since the measures of job insecurity, trait mindfulness, intrinsic motivation and innovative work behavior came from the same source, our results might be contaminated by common method bias. However, as recommended by methodologists (Podsakoff et al., 2012), we adopted both procedural (i.e., temporal separation between the measurements in Study 1 and Study 2) and statistical (i.e., the latent method factor technique in Study 1) remedies to alleviate such bias. Moreover, while the adoption of a multisource rating would be warranted in future studies in order to counteract method bias, it is worth noting that in the case of innovative work behavior, the use of other ratings may not be recommended. Indeed, employees have more information than their supervisors or peers about the background of their work tasks (Janssen, 2000) and about the degree to which they have generated or championed their ideas to other organizational members (Shalley, Gilson, & Blum, 2009). Research has also shown that self-reported ratings of innovation-related behaviors are consistent with other ratings (e.g., Janssen, 2000). For instance, Axtell et al. (2000) showed that self-ratings of suggestion making ($r = .62$) and innovation implementation ($r = .42$) were significantly correlated with supervisor ratings while Janssen (2000) found a significant correlation between employees' self-rated and supervisor-rated innovative work behavior ($r = .35$). Thus, the use of self-ratings to examine employee innovative work behavior was justifiable.

Second, research has shown that both intrinsic motivation (e.g., Vandercammen, Hofmans, & Theuns, 2014) and innovative work behavior (e.g., Ng & Lucianetti, 2016) are subject to within-individual variations over time, which highlights the relevance of

investigating the mediating effects of intrinsic motivation on the job insecurity–innovative work behavior relationship from a dynamic perspective. Similarly, given the time-lagged nature of our studies, we could not rule out potential reciprocal relationships between intrinsic motivation and innovative behavior. Future research should therefore replicate the current results by adopting longitudinal designs (i.e., panel and diary studies) to examine the trajectory of changes in intrinsic motivation and innovative behavior, as well as to provide more robust evidence for the hypothesized causal effects. Finally, it is worth noting that the average level of job insecurity was relatively low in both Study 1 (M = 1.46, SD = 0.45) and Study 2 (M = 1.85, SD = 0.85), thereby making it likely that the variation of the job insecurity scores was lower. Such relative lower variation, in turn, might have suppressed the relationships between job insecurity and the other study variables. Accordingly, future research should replicate the present investigation on samples that present a higher variability in the level of job insecurity in order to enhance the generalizability of our findings.

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Footnotes

[1] Prior research has shown that job insecurity had curvilinear effects on both motivational states (e.g., Selenko, Mäkikangas, Mauno, & Kinnunen, 2013) and work-related behaviors (e.g., Lam, Liang, Ashford, & Lee, 2015). To rule out this possibility, we therefore examined the quadratic effect of job insecurity on intrinsic motivation and innovative work behavior. Results showed that the quadratic term of job insecurity was unrelated to both intrinsic motivation (B = .03, *ns*, Study 1; B = –.15, *ns*, Study 2) and innovative work behavior (B = .09, *ns*, Study 1; B = .05, *ns*, Study 2). After controlling for the quadratic term of job insecurity, the linear relationship between job insecurity and intrinsic motivation remained significant in Study 1 (B = –.33, p < .05), but turned non-significant in Study 2 (B = –.09, *ns*). Since this control variable was unrelated to the criteria while reducing statistical power of the hypothesized predictor, we decided not to include it in the regression model, as recommended by Becker (2005).

Table 1

Descriptive Statistics and Correlations

Variable	*M*	*SD*	1	2	3	4	5	6	7	8	9
Study 1 (N = 138)											
1. Gender	1.49	0.50	–								
2. Age	32.97	7.94	–.07	–							
3. Educational level	3.77	0.99	–.17*	–.04	–						
4. Organizational tenure	3.93	3.80	–.03	.54**	.02	–					
5. Work engagement (Time 2)	3.80	0.49	.14	.03	.03	.01	(.87)				
6. Job insecurity (Time 1)	1.46	0.45	–.06	–.06	–.17*	–.15	–.23*	(.70)			
7. Trait mindfulness (Time 1)	3.58	0.41	.14	.09	.01	–.06	.12	–.13	(.73)		
8. Intrinsic motivation (Time 2)	3.80	0.71	.11	–.03	.01	–.02	.61**	–.20*	.08	(.85)	
9. Innovative work behavior (Time 2)	3.36	0.71	.14	.01	.06	–.02	.32**	–.02	.08	.32**	(.92)
Study 2 (N = 157)											
1. Gender	1.39	0.49	–								
2. Age	33.60	10.19	.19*	–							
3. Educational level	3.39	1.11	–.11	–.11	–						
4. Organizational tenure	4.85	4.53	.13	.50**	–.11	–					
5. Work engagement (Time 2)	3.16	0.68	.05	.04	.07	.08	(.90)				
6. Job insecurity (Time 1)	1.85	0.85	–.01	–.10	–.01	–.10	–.27**	(.86)			
7. Trait mindfulness (Time 1)	3.44	0.57	–.05	.09	–.18*	.14	–.05	–.28**	(.87)		
8. Intrinsic motivation (Time 2)	2.94	0.96	.04	.07	.11	.07	.84**	–.22*	–.06	(.91)	
9. Innovative work behavior (Time 2)	2.78	0.79	–.04	–.07	.09	.09	.46**	–.16	–.18*	.50**	(.93)

Note. Internal consistency coefficients (Cronbach's alphas) are reported in parentheses along the diagonal. For Gender: 0 = female,1 = male. For Educational level: 0 = Lower than University education, 1 = University education.*$p < .05$; **$p < .01$.

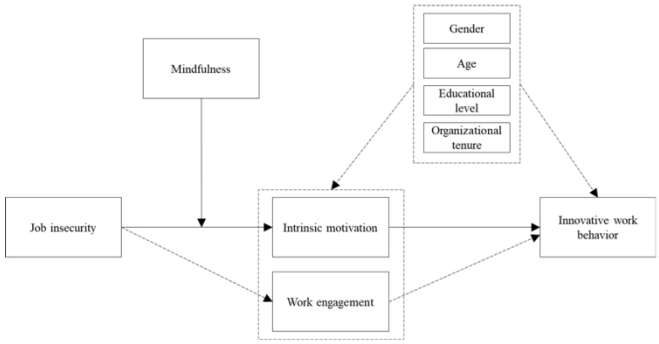
Table 2

Multiple Regression Results

	Intrinsic Motivation			Work engagement			Innovative work behavior	
Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Study 1 (N = 138)								
Gender	.14 (.12)	.13 (.12)	.14 (.12)	.13 (.08)	.12 (.08)	.12 (.08)	.15 (.12)	.14 (.12)
Age	.00 (.01)	.00 (.01)	–.00 (.01)	.00 (.01)	.00 (.01)	.00 (.01)	.00 (.01)	.00 (.01)
Education	.07 (.30)	.07 (.30)	.07 (.29)	.24 (.20)	.23 (.20)	.23 (.20)	.32 (.29)	.31 (.29)
Organizational tenure	–.01 (.02)	–.01 (.02)	–.00 (.02)	–.01 (.01)	–.00 (.01)	–.00 (.01)	–.00 (.01)	–.01 (.02)
Work engagement							.22 (.15)	.22 (.15)
Job insecurity	–.32* (.14)	–.31* (.14)	–.23 (.15)	–.25* (.09)	–.24* (.10)	–.21* (.10)	–.05 (.14)	–.05 (.14)
Intrinsic motivation							.20* (.10)	.21* (.10)
Trait mindfulness		.07 (.15)	.10 (.15)		.06 (.10)	.06 (.10)		.04 (.15)
Job insecurity × Trait mindfulness			.90* (.34)			.32 (.23)		–.14 (.34)
Total R^2	.05	.05	.10	.08	.08	.09	.14	.14
ΔR^2		.00	.05*		.00	.01		.00
Study 2 (N = 157)								
Gender	.08 (.16)	.06 (.16)	.12 (.16)	.07 (.11)	.06 (.11)	.10 (.11)	–.07 (.11)	–.10 (.11)
Age	.00 (.01)	.00 (.01)	.00 (.01)	–.00 (.01)	–.00 (.01)	–.00 (.01)	–.01* (.01)	–.01 (.01)
Education	.27 (.18)	.22 (.18)	.23 (.18)	.13 (.13)	.10 (.13)	.10 (.13)	.06 (.13)	.00 (.13)
Organizational tenure	.01 (.02)	.01 (.02)	.01 (.02)	.01 (.01)	.01 (.01)	.01 (.01)	.02 (.01)	.03 (.01)
Work engagement							.13 (.15)	.11 (.15)
Job insecurity	–.24* (.09)	–.28** (.09)	–.22* (.10)	–.21** (.09)	–.24** (.07)	–.19* (.07)	–.04 (.07)	–.09 (.07)
Intrinsic motivation							.32** (.11)	.32** (.11)
Trait mindfulness		–.20 (.14)	–.21 (.14)		–.15 (.10)	–.16 (.10)		–.27* (.10)
Job insecurity × Trait mindfulness			.32* (.16)			.24* (.11)		.01 (.12)
Total R^2	.07	.08	.10	.08	.10	.12	.28	.31
ΔR^2		.01	.02*			.02*		.03*

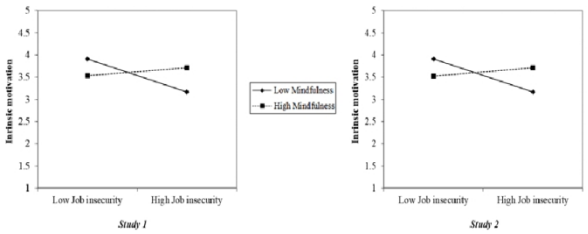
Note. Except for Total R^2 and ΔR^2 rows, entries are unstandardized regression coefficients. Standard errors are provided in parentheses next to the unstandardized regression coefficients. For Gender: 0 = female, 1 = male. For Educational level: 0 = Lower than University education, 1 = University education.*$p < .05$; **$p < .01$.

Figure 1. Conceptual model. Note: Dashed arrows represent relationships that are not included in the hypotheses.



311x174mm (120 x 120 DPI)

Figure 2. Moderating Effect of Mindfulness on the Relationship between Job Insecurity and Intrinsic Motivation.



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Abstract

Research has disregarded the processes and boundary conditions associated with the effects of job insecurity on innovative work behavior. Combining the job demands-resources and the self-determination perspectives, the present study develops and tests a first-stage moderated mediation model that identifies intrinsic motivation as a key mechanism accounting for a negative effect of job insecurity on innovative behavior and trait mindfulness as a buffer against the detrimental impact of job insecurity on intrinsic motivation and, indirectly, innovative work behavior. Two time-lagged studies – a two-wave study of 138 employees from Canadian firms and a three-wave study of 157 employees from U.S. firms – were conducted to test the hypothesized model. Supporting our predictions, intrinsic motivation mediated a negative relationship between job insecurity and innovative work behavior. Moreover, high levels of trait mindfulness were observed to attenuate the negative relationship of job insecurity with intrinsic motivation and, indirectly, innovative behavior. These findings contribute to the literature by disclosing the processes linking job insecurity with impaired work outcomes and help to elucidate how and when employee can keep their innovative potential alive in spite of insecure work conditions.

Keywords: job insecurity; innovative work behavior; intrinsic motivation; trait mindfulness

Job Insecurity and Innovative Work Behavior: A Moderated Mediation Model of Intrinsic Motivation and Trait Mindfulness

Over the last two decades, the increased global competition and the ongoing transformations in technological, economic, and political environments have led employees to experience increased job insecurity (Shoss, 2017) – the perception and/or concern about the potential to involuntarily lose one's present job in the future (Vander Elst, Van den Broeck, De Cuyper, & De Witte, 2014). Nevertheless, the same employees that have experienced increased job insecurity are also increasingly pressured to engage in innovative work behaviors – to generate, promote and implement new and useful ideas (Janssen, 2000) – to help organizations survive and achieve a competitive advantage in such turbulent environments (Shin, Yuan, & Zhou, 2017).

Research evidence, however, suggests that insecure job perceptions and innovative behaviors do not necessarily "get along very well" with each other; rather, the former occurs at the expense of the other. Indeed, some studies have found job insecurity to impair innovative behaviors (De Spiegelaere, Van Gyes, De Witte, Niesen, & Van Hootegem, 2014; Niesen, Van Hootegem, Handaja, Battistelli, & De Witte, 2018; Niesen, Van Hootegem, Vander Elst, Battistelli, & De Witte, 2018; Probst, Chizh, Jiang, Hu, & Austin, 2020). These findings, combined with the plethora of studies documenting the detrimental effects of job insecurity on work outcomes (for recent reviews, see Lee, Huang, & Ashford, 2018; Shoss, 2017), identify a theoretically and practically relevant question: how and under what conditions can employees be enabled to innovate under perceived insecure job conditions? Unfortunately, due to the scant research attention devoted to the relationship between job insecurity and innovative work behavior, evidence-based answers to this question are lacking. Indeed, despite providing evidence for the negative effects of job insecurity on innovation-

related behaviors, prior studies have not paid sufficient attention to the processes and boundary conditions associated with such effects.

The present study aims to address these important research gaps by relying on the insights from job demands-resources (JD-R; Bakker and Demerouti, 2017) theory and self-determination theory (SDT; Deci & Ryan, 2000) to understand the "how" and "when" of the job insecurity–innovative work behavior relationship. Combining these theoretical perspectives, we develop and test a first-stage moderated mediation model that identifies the following: a) intrinsic motivation – the enactment of activities for the experienced pleasure or inherent interest (Ryan & Deci, 2000) – as a mediating process underlying a negative relationship between job insecurity and innovative work behavior, and b) trait mindfulness – the individual disposition to be attentive to and aware of the experiences that occur in the present moment (Brown & Ryan, 2003) – as a personal resource that moderates (i.e., buffers) this mediated relationship.

The present study is expected to contribute to prior stream of research that addressed the "how" and "when" questions of the job insecurity–innovation relationship (Lee et al., 2018; Shoss, 2017). The study provides a motivational approach that identifies intrinsic motivation as a key mechanism explaining the impact of job insecurity on innovative behavior and mindfulness as an individual resource shaping the strength of this motivational path. Thus, our study provides a new theoretical lens to understand the processes and boundary conditions associated with the impact of job insecurity on employee innovativeness. Moreover, stressful work conditions have been recognized as important impediments to innovation-related behaviors (Fay, Bagotyriute, Urbach, West, & Dawson, 2017). However, as previously discussed, only a few studies have actually examined the impact of job insecurity on innovative behaviors, thus leaving the issue of how employees exposed to insecure jobs can counteract such a stressful condition that they do not have any control over

unresolved. Our motivational model of job insecurity discloses the role of trait mindfulness as an individual-based resource that is expected to keep the motivational fire burning despite the presence of insecure job conditions and thus maintain innovative work behavior for the first time. By examining the moderating impact of trait mindfulness, our study also extends the current knowledge of the benefits of this individual characteristic at work. Indeed, to date, mindfulness has been primarily examined as a direct determinant of work outcomes (Good et al., 2016). We move a step further by clarifying its role as a protective factor for intrinsic motivation and innovative behavior against job insecurity for the first time. Figure 1 depicts our conceptual model, which is developed in the sections below.

[Figure 1 about here]

Theory and Hypotheses

Job insecurity and Innovative Work Behavior: Combining the JD-R and SDT Perspectives

JD-R theory (Bakker & Demerouti, 2017) and SDT (Deci & Ryan, 2000) provide important insights that, combined, help to understand how employees can be more able to access the energetic resources needed to innovate. SDT uniquely suggests that the reason why constraining job conditions impair the quality of motivation, which is a crucial determinant of adaptive functioning (Fernet, Austin & Vallerand, 2012; Gagné & Deci, 2005). More precisely, according to SDT, the impairing effects of job demands would be explained by a drop in employees' autonomous motivation (i.e., acting volitionally and with coherence with one's self), whose highest form is intrinsic motivation (Ryan & Connell, 1989; Ryan & Deci, 2000). This principle is in line with the challenge-hindrance model of stress, which classifies job demands into challenge stressors and hindrance stressors based on their different effects on work motivation (LePine, Podsakoff, & LePine, 2005). Challenge stressors, such as workload and time pressure, are demands that motivate task performance by providing

opportunities for personal gains, growth or development; conversely, hindrance stressors, such as job insecurity, are demands that constrain personal growth, development and achievements and thus are associated with lower levels of work motivation (LePine et al., 2005). In this instance, the JD-R perspective contends that personal resources – the characteristics or aspects of the self that refer to the individuals' ability to control and impact successfully upon their environment (Bakker & Demerouti, 2017) – play a key role in buffering the energy-thwarting impact of job demands (Schaufeli & Bakker, 2004).

Thus, taken together, the insights from the SDT and JD-R perspectives help to understand *why* employees might be unable to innovate under insecure job conditions and *when* the innovative potential can be preserved among such employees. Consistent with these theoretical premises, we incorporate SDT and JD-R theory into a unified moderated mediation framework to explain the processes and boundary conditions associated with the effects of job insecurity on innovative work behavior. In the next two sections, we elaborate on the mediating role of intrinsic motivation in linking job insecurity with innovative behavior and on the moderating role of trait mindfulness in attenuating the negative effects of job insecurity on intrinsic motivation and, indirectly, innovative work behavior.

Mediating Role of Intrinsic Motivation

Intrinsic motivation refers to the desire to expend effort on a given task based on an interest in and enjoyment of the task itself (Gagné & Deci, 2005; Ryan & Deci, 2000). Intrinsic motivation shares a functional similarity with work engagement, a motivational state characterized by vigor, dedication, and absorption (Schaufeli, Salanova, González-Romá, & Bakker, 2002), which has been previously found to account for a negative relationship between job insecurity and innovative work behavior (De Spiegelaere et al., 2014). Precisely, both constructs provide the energizing potential necessary to engage in change-oriented behaviors (Salanova & Schaufeli, 2008). However, intrinsic motivation differs from work

engagement in terms of the specific components that underlie one's motivational state. Indeed, while work engagement represents the general feeling of energy and fulfillment in the execution of one's work duties (i.e., the "what" component of motivation), intrinsic motivation is more focused on the sources (or reasons) that drive such positive, energetic responses (i.e., the "why" component of motivation). Thus, our study emphasizes the "why" component of one's motivation as a key process linking job insecurity and innovative behavior.

Consistent with JD-R theory and SDT, we argue that exposure to perceived insecure job conditions would thwart the level of intrinsic motivation that is necessary to be involved in innovative behaviors. More precisely, job insecurity represents a forced and aversive situation that individuals are unlikely to change (Sverke & Hellgren, 2002). As such, it reduces an individual's feelings of volition and of internal causality that are at the heart of intrinsic motivation. Moreover, job insecure employees have limited knowledge about whether and how their work will change in the future, thus being unable to undertake actions that enable them to affect the evolution of their job condition (De Witte, 1999). As a result, such people would be prevented from experiencing high levels of intrinsic motivation (Fernet et al., 2016). Furthermore, as a job demand that thwarts individual growth and gain, job insecurity threatens employees' capacity to achieve self-valued and personally important goals through their work efforts (Wang, Lu & Lu, 2014). As such, insecure employment situations inherently preclude the possibility for employees to stay intrinsically motivated in the pursuit of their work activities (Ryan & Deci, 2000).

The lower feelings of intrinsic motivation elicited by insecure job conditions, in turn, are expected to undermine employees' innovative functioning. Indeed, low intrinsically motivated employees tend to be less curious and have a weak preference for relatively complex tasks (Koestner, Zuckerman, & Koestner, 1987). As a result, such people would be

less likely to access diverse and important information, attempt to resolve problems from a variety of perspectives, examine different environments, and identify and test various alternatives, thus being less capable of developing and implementing novel ideas (Amabile, 1996). Moreover, by reducing work efforts, low intrinsic motivation prevents employees from striving to face adversities or obstacles to idea promotion and implementation (Pychyl, Lee, Thibodeau, & Blunt, 2000). Indirect support for this line of reasoning is provided by prior studies showing that job insecurity is associated with impaired employee functioning – higher counterproductive work behavior (Van den Broeck et al., 2014) and lower well-being (Vander Elst, Van den Broeck, De Witte, & De Cuyper, 2012) – via psychological need frustration – a proximal determinant of intrinsic motivation (Deci & Ryan, 1995). Moreover, intrinsic motivation has been found to mediate a negative relationship between abusive supervision, which represents a key energy-draining condition (Li, Wang, Yang, & Liu, 2016), and employee creativity (Zhang, Kwan, Zhang, & Wu, 2014). Hence, we propose the following:

Hypothesis 1: Intrinsic motivation will mediate a negative relationship between job insecurity and innovative work behavior.

Moderating Role of Trait Mindfulness

Following JD-R theory, personal resources that help people deal effectively with demanding conditions may prevent the thwarting effect of job insecurity. Supporting these assumptions, research has suggested that the ability to cope with job demands is influenced by individual difference variables (LePine et al., 2005). However, from an SDT perspective, the impairing effect of job insecurity on employee innovative behavior is expected to be transmitted by intrinsic motivation. Accordingly, the integration of the JD-R and the SDT approaches suggests that in order to understand how the innovation-impairing consequences of job insecurity can be offset, it is relevant to identify those personal resources that are uniquely positioned to influence the motivational potential of employees exposed to

demanding situations. Consistent with this theoretical rationale, and building on theoretical and empirical advances on mindfulness, we contend that mindfulness would attenuate the undermining effect of job insecurity on intrinsic motivation and, ultimately, innovative behavior. In the present study, mindfulness is conceptualized and operationalized as a stable dispositional tendency that varies across people rather than as a state that can fluctuate within individuals (Brown & Ryan, 2003).

High levels of trait mindfulness interrupt automatic conditioned reactions, thus enabling a conscious reflection that allows insecure employees to re-evaluate the context in which initial appraisals of job insecurity are made (Teasdale & Chaskalson, 2011). As a result, mindful employees are provided with a larger "psychological space" for accessing new perspectives that allow them to constructively reframe their insecure job situation as an opportunity for personal growth and development (Garland, Farb, Goldin, & Fredrickson, 2015). In this condition, even if they feel insecure, employees can perceive that such a job is not discordant or incompatible with the self (Deci & Ryan, 1995, 2000), which is essential to keep intrinsic motivation alive (Deci & Ryan, 2000; Rosso, Dekas, & Wrzesniewski, 2010). For the same reason, mindful employees might feel more confident in their ability to exert control over their adverse condition and to achieve goals (Duggleby, Cooper, & Penz, 2009). As a result, mindful employees will be nonetheless protected against the draining effect of their job uncertainty (Werner & Smith, 1992) and, consequently, will be prevented from experiencing lower intrinsic motivation (Deci & Ryan, 2000).

Conversely, since they are less able to decenter from the automatic and negative response patterns (thoughts and feelings) related to job insecurity, low mindful employees would ruminate these concerns, remaining imprisoned in such reactions (Shapiro, Brown, & Biegel, 2007). As a result, job insecure and low mindful employees would have limited chances to preserve their intrinsic motivation and innovative behavior. Supporting our

arguments, trait mindfulness has been found to buffer employees from perceptions of organizational injustice (Long & Christian, 2015) – a strong correlate of job insecurity – and from stressful job conditions (Grover, Teo, Pick, & Roche, 2017) – a key feature of job insecurity. In line with previous research and the above reasoning, we therefore hypothesize the following.

Hypothesis 2: Trait mindfulness will moderate the negative relationship between job insecurity and intrinsic motivation such that this relationship will be weaker (vs. stronger) when trait mindfulness is high (vs. low).

Hypothesis 3: Trait mindfulness will moderate the negative indirect relationship between job insecurity and innovative work behavior through intrinsic motivation such that this indirect relationship will be weaker (vs. stronger) when trait mindfulness is high (vs. low).

Overview of the Studies

According to Hochwarter, Ferris, and Hanes (2011), research involving multiple studies makes relevant contributions via replication and extension. Similarly, Cortina, Aguinis, and DeShon (2017) recently recommended testing theoretical models, or a portion of them, through improved, or at least different, independent empirical attempts. Following the replication–and–extension approach recommended by these methodologists, we conducted two time-lagged studies to test our hypotheses and used a three-month time lag between measurements to reduce common method bias (Podsakoff, MacKenzie, & Podsakoff, 2012). In Study 1, we adopted a two-wave design with job insecurity and trait mindfulness measured at Time 1 and the mediator (i.e., intrinsic motivation) and the dependent variable (i.e., innovative work behavior) assessed at Time 2. In Study 2, we adopted a three-wave design with job insecurity and trait mindfulness measured at Time 1, intrinsic motivation measured at Time 2, and innovative work behavior measured at Time 3.

Study 1

Method

Sample and Procedure

We surveyed employees working in French-Canadian firms from a variety of industries (i.e., architecture and design, communication and marketing, leisure, and technology). Upon agreeing to participate in the study, the firms' executives sent an email to their employees on behalf of the researchers that asked them to complete an online survey on their job conditions and innovation in two separate time periods. The introductory message described the study goals, stated that responses would be confidential, and provided a hyperlink to the first survey. The responses to the questionnaires were matched across time using an anonymous code created by the respondents at Time 1. At Time 1, 458 employees were contacted, and 347 completed the online survey. Of these, 115 did not enter the requested anonymous code, which yielded a sample of 232 individuals who were contacted for the Time 2 survey. Among them, 94 did not respond or provided incomplete responses, resulting in a final sample of 138 employees with matched data across time for an overall response rate of 30.13%. Time 2 employees did not differ from those who participated only at Time 1 on job insecurity ($t_{[272]} = -1.79$, *ns*) and mindfulness ($t_{[272]} = -1.03$, *ns*). The demographics of participants in this sample were 51% were female, the average age was 32.97 years ($SD = 7.94$), the average organizational tenure was 3.93 years ($SD = 3.80$), and 58% had at least an undergraduate degree.

Measures

Job insecurity. Job insecurity was measured using the 4-item scale developed by Vander Elst, De Witte, and De Cuyper (2014). Since a French version of the scale was not available when the data for the preset study were collected, this instrument was translated from English to French using the translation and back-translation procedure recommended by

Brislin (1981). The respondents were asked to indicate the option that best corresponded to their opinion about their job condition on a scale ranging from 1 (*totally disagree*) to 5 (*totally agree*) A sample item is "I feel insecure about the future of my job". The reliability of this scale was .70.

Trait mindfulness. We adopted the French version (Jermann et al., 2009) of Brown and Ryan's (2003) Mindful Attention Awareness Scale (MAAS) to assess trait mindfulness. Unlike other scales developed for use in clinical contexts (e.g., Walach et al., 2006), the MAAS measures trait mindfulness across a wider range of domains, including the work context (Dane & Brummel, 2013). Participants were asked to indicate the extent to which each of the 15 statements reflected their own experience on a scale ranging from 1 (*almost always*) to 5 (*almost never*). Sample items include "I find it difficult to stay focused on what's happening in the present" and "I find myself doing things without paying attention". The reliability of this scale was .73.

Intrinsic motivation. Intrinsic motivation was measured using the 3-item subscale from the French version of the Multidimensional Work Motivation Scale (Gagné et al., 2015). Participants were asked to indicate the degree to which each of 3 statements corresponded to one of the reasons for which they put efforts into their current job on a scale ranging from 1 (*not at all*) to 5 (*completely*). A sample item is "[I put efforts in this job…] because what I do in my work is exciting". The reliability of this scale was .85.

Innovative work behavior. Innovative work behavior was measured with the French translation (Montani, Dagenais-Desmarais, Giorgi & Grégoire, 2018, Sample 1) of Janssen's (2000) 9-item scale, which assesses the frequency with which employees report being involved in the generation (e.g., "Creating new ideas for difficult issues"), promotion (e.g., "Acquiring approval for innovative ideas") and realization (e.g., "Introduced innovative ideas into the work environment in a systematic way") of new ideas in the workplace. Responses

were rated on a 5-point scale ranging from 1 (*never*) to 5 (*always*). The reliability of this scale was .92.

Control variables. Previous research has shown that age, gender, education, and organizational tenure are likely to be associated with innovative work behavior (Hammond, Neff, Farr, Schwall, & Zhao, 2011). Consistent with these findings, the empathizing-systemizing theory (Baron-Cohen, Knickmeyer, & Belmonte, 2005) emphasizes gender differences in creative thinking based on core differences in the cognitive styles of males (i.e., characterized by a more analytical and systemizing style) and females (i.e., characterized by a more pronounced empathizing style). Likewise, age, educational level and organizational tenure reflect domain-relevant experiences, knowledge, expertise and skills that, according to the componential theory of creativity (Amabile, 1983), represent a core determinant of individuals' capacity to produce new ideas. Moreover, we controlled for the mediating role of work engagement (9 items; Schaufeli, Bakker, & Salanova, 2006) in the (moderated) indirect relationship between job insecurity and innovative work behavior, since, according to JD-R theory, this mechanism accounts for the effects of stressful job conditions on work-related behaviors (Bakker & Demerouti, 2017).

Results

Confirmatory Factor Analysis and Assessment of Common Method Bias

We examined the discriminant validity of the substantive variables of our study using confirmatory factor analysis (CFA) via Mplus 7.11 (Muthén & Muthén, 1998-2015). However, given the large number of items (31 items) for this analysis compared to the low sample size ($N = 138$), we applied the item parceling technique to the items of the trait mindfulness, the work engagement and the innovative work behavior scales (Little, Cunningham, Shahar, & Widaman, 2002). Specifically, following Little et al.'s (2002) recommendation, we first conducted a one-factor CFA for each construct and then created

three parallel parcels (indicators) per latent factor by combining items with higher factor loadings with those with lower factor loadings. The hypothesized five-factor model displayed a good fit to the data (χ^2 [94] = 134.50, CFI = .96, RMSEA = .06, SRMR = .06) and outperformed both a four-factor model combining work engagement and intrinsic motivation (χ^2 [98] = 219.25, CFI = .87, RMSEA = .09, SRMR = .07; $\Delta\chi^2$ [4] = 84.75, $p < .01$) and a one-factor model (χ^2 [104] = 606.58, CFI = .48, RMSEA = .19, SRMR = .13; $\Delta\chi^2$ [10] = 472.08, $p < .01$).

However, because intrinsic motivation, work engagement and innovative work behavior were measured at the same time by the same source, the hypothesized relationship between these variables could be inflated by common method variance. Accordingly, we used the unmeasured latent method factor technique (Podsakoff et al., 2012) to examine this issue within CFA. This approach is recommended when the specific source of method bias is unknown or cannot be measured (Williams, Cote, & Buckley et al., 1989), as in the present study. The CFA model for intrinsic motivation and innovative work yielded a better fit to the data after the inclusion of the method factor ($\Delta\chi^2$ [9] = 21.13, $p < .01$). However, the method factor explained 24.17% of the total variance, which is not higher than the median amount of method variance (25%) observed in self-report research (Podsakoff et al., 2012; Williams et al., 1989). Therefore, although common method bias cannot be fully ruled out, it is unlikely to invalidate our study's findings. Table 1 provides the descriptive statistics, correlations and reliability estimates for the study variables.

[Table 1 about here]

Hypothesis Testing

Table 2 provides the results of the (moderated) multiple regression analyses predicting intrinsic motivation and innovative work behavior and provides the information necessary to test Hypotheses 1-3. Hypothesis 1 predicted that intrinsic motivation would mediate a

negative relationship between job insecurity and innovative work behavior. As Table 2 shows, job insecurity was negatively related to both intrinsic motivation ($B = –.35$, $p < .05$, Model 1) and work engagement ($B = –.25$, $p < .05$, Model 4). Moreover, Table 2 (Model 7) shows that intrinsic motivation was positively related to innovative work behavior ($B = .20$, $p < .01$) whereas work engagement was not significantly associated with innovative work behavior ($B = .22$, *ns*). To determine whether job insecurity was indirectly related to innovative work behavior through reduced intrinsic motivation, we adopted the Monte Carlo method technique with 20,000 resamples with replacement of the original data and obtained 95% bias-corrected confidence intervals (CIs) for the estimates of these effects (Preacher, & Selig, 2012). The results of these analyses indicate that the indirect negative effect of job insecurity on innovative work behavior through intrinsic motivation was significant (–.07; CI = – .15, –.01), thus fully supporting Hypothesis 1.

[Table 2 about here]

Hypothesis 2 stated that trait mindfulness would moderate the negative relationship between job insecurity and intrinsic motivation such that this relationship would be weaker at high levels of trait mindfulness. Following Aiken and West (1991), all continuous variables were centered before entering them into the regression models. In line with Cohen and Cohen's (1983) recommendations, controls and job insecurity were entered in Step 1, trait mindfulness was entered in Step 2, and the interaction term between job insecurity and trait mindfulness was introduced at Step 3. As shown in Table 2, job insecurity significantly interacted with trait mindfulness in predicting intrinsic motivation ($B = .90$, $p < .05$, Model 3) but not in predicting work engagement ($B = .32$, *ns*, Model 6). This interaction is graphically represented in Figure ~~1~~2. A simple slope test (Aiken & West, 1991) showed that job insecurity was negatively and significantly related to intrinsic motivation when trait mindfulness was low ($B = –.66$, $p < .01$) but was unrelated to intrinsic motivation when trait

mindfulness was high (B = .08, *ns*). Moreover, we probed this interaction using the Johnson-Neyman technique (see Gardner, Harris, Li, Kirkman, & Mathieu, 2017), which helps detect the specific "regions of significance" of trait mindfulness where the relationship between job insecurity and intrinsic motivation is significantly different from zero. The results showed that when the level of trait mindfulness is below .01 (i.e., the lower 47%), a significantly negative relationship between job insecurity and intrinsic motivation emerged. When the level of trait mindfulness was above .01 (i.e., the upper 53%), this relationship was not significantly different from zero. Taken together, these findings support Hypothesis 2.

[Figure ~~1~~ 2 about here]

Finally, Hayes's (2012) PROCESS macro was used to test Hypothesis 3, which predicted that trait mindfulness would moderate the negative indirect relationship between job insecurity and innovative work behavior via intrinsic motivation. Based on 20,000 Monte Carlo replications, we estimated the bias-corrected 95% CIs for these conditional indirect effects. Consistent with our predictions, the conditional indirect effect of job insecurity on innovative work behavior was significantly negative when trait mindfulness was low (–.14; CI = –.32, –.01) but was nonsignificant when trait mindfulness was high (.02; CI = –.08, .13). Therefore, these results support Hypothesis 3. As a robustness check, we tested again the hypothesized patterns of relationships without the inclusion of control variables. Comparison between our hypotheses tests with and without control variables yielded identical results: intrinsic motivation significantly mediated a negative relationship between job insecurity and innovative work behavior (indirect effect = –.10; CI = – .21, –.01), and this negative indirect effect was significant at low (–.19; CI = – .35, –.07) but not high (.00; CI = – .09, .14) levels of mindfulness.

Study 2

Method

Sample and procedure

In Study 2, we adopted a three-wave time-lagged design in which job insecurity and trait mindfulness were measured at Time 1, intrinsic motivation was measured at Time 2, and innovative work behavior were measured at Time 3. We established a three-month interval to test the results across time. Participants were recruited through Prolific Academic, an online crowdsourcing research platform that allows researchers to recruit subjects for applied and experimental research projects from a large and diverse workforce. Research has demonstrated that the reliability and diversity of the data collected through these online platforms are at least comparable to those obtained via traditional approaches (e.g., Cheung, Burns, Sinclair, & Sliter, 2017). In addition, prior research has used panel data to examine the effects of job insecurity in the workplace (e.g., Jiang, Hu, Näswall, López Bohle, & Wang, 2020). Moreover, recent results have indicated a higher level of naivety (i.e., unfamiliarity with commonly used research materials) and a lower propensity to engage in untruthful behaviors among Prolific Academic users than the users of alternative, renowned online platforms such as CrowdFlower and Mechanical Turk (Peer, Brandimarte, Samat, & Acquisti, 2017). The respondents were paid $1.60 at each time point upon completion of the survey questionnaire.

The participants were employees working in a wide range of U.S. industries (e.g., education, finance, manufacturing, wholesale and retail). As in Study 1, the participants generated their own anonymous code to allow researchers to match their responses across time. At Time 1, we received completed responses from all employees that were contacted (N = 400). At Time 2, we obtained 264 returned questionnaires, 13 of which containing missing information. Accordingly, we contacted 251 participants to complete the survey at Time 3. Among them, 163 answered the Time 3 questionnaire, but 6 participants did not enter the anonymous code. Thus, the final sample included 157 employees (response rate = 39.25%)

with matched data across time. The respondents were 33.60 years old on average (*SD* = 10.19), 61.10% of them were male, and 76.40% were high school graduates or higher. Moreover, they had an average organizational tenure of 4.85 years (*SD* = 4.53).

Measures

We used the same scales as in Study 1 to measure job insecurity (4 items, α = .86) trait mindfulness (15 items, α = .87), intrinsic motivation (3 items, α = .91) and innovative work behavior (9 items, α = .93). As in Study 1, we controlled for age, gender, educational level, organizational tenure, and work engagement.

Results

Confirmatory Factor Analysis

As in Study 1, we conducted confirmatory factor analysis (CFA) to examine the discriminant validity of the study variables. Again, given the large number of items (31 items) for this analysis compared to the low sample size (*N* = 157), we parceled the items of the trait mindfulness and the innovative work behavior scales by creating three parcels per latent variable (Little et al., 2002). The hypothesized five-factor model fit the data well (χ^2 [94] = 139.94, CFI = .97, RMSEA = .06, SRMR = .05) and fit the data better than either a four-factor model combining intrinsic motivation and work engagement (χ^2 [98] = 149.64, CFI = .97, RMSEA = .06, SRMR = .05; $\Delta\chi^2$ [4] = 9.7, $p < .05$) or a one-factor model (χ^2 [104] = 989.43, CFI = .51, RMSEA = .23, SRMR = .19; $\Delta\chi^2$ [10] = 839.79, $p < .01$). These results thus suggest that the study variables are distinguishable. The descriptive statistics, correlations and reliability estimates for the study variables are shown in Table 1.

Hypothesis Testing

We used the same analytical procedure as in Study 1 to test Hypotheses 1-3. The results of (moderated) multiple regression analyses predicting intrinsic motivation and innovative work behavior are shown in Table 2. Job insecurity was negatively associated with

both intrinsic motivation ($B = –.24$, $p < .05$, Model 1) and work engagement ($B = –.21$, $p < .05$, Model 4). In turn, intrinsic motivation was positively related to innovative work behavior ($B = .32$, $p < .05$, Model 7) whereas work engagement did not significantly predict innovative work behavior ($B = .13$, *ns*, Model 7). As in Study 1, we used the Monte Carlo technique with 20,000 resamples with replacement of the original data to estimate the indirect relationship between job insecurity and innovative work behavior via intrinsic motivation. The results reveal that this indirect relationship was significant (–.08; CI = – .17, –.01), thereby supporting Hypothesis 1. We then examined the moderating effect of trait mindfulness on the negative relationship between job insecurity and intrinsic motivation (Hypothesis 2). The results show that job insecurity significantly interacted with trait mindfulness to predict both intrinsic motivation ($B = .32$, $p < .05$, Model 3) and work engagement $B = .24$, $p < .05$, Model 6). The results from a simple slope test further indicated that the relationship between job insecurity and intrinsic motivation was negative and significant when trait mindfulness was low ($B = –.42$, $p < .01$) but it became nonsignificant when trait mindfulness was high ($B = –.05$, *ns*) (see Figure ~~1~~2). The results from the Johnson-Neyman analysis revealed that when the level of trait mindfulness was below .14 (i.e., the lower 52%), a significantly negative relationship between job insecurity and intrinsic motivation emerged. When the level of trait mindfulness was above .14 (i.e., the upper 48%), this relationship was not significantly different from zero. Hypothesis 2 was thus supported.

Finally, using Hayes's (2012) PROCESS macro, we examined whether the negative indirect relationship between job insecurity and innovative work behavior via intrinsic motivation was moderated by trait mindfulness (Hypothesis 3). The results from the estimation of bias-corrected 95% CIs on 20,000 Monte Carlo replications showed that the conditional indirect effect of job insecurity on innovative work behavior was negative and significant when trait mindfulness was low (–.13, CI = –.26, –.04) but it turned nonsignificant

when trait mindfulness was high (–.02, CI = –.12, .07). Hypothesis 3 was thus supported. As for Study 1, hypotheses were retested without including control variables, and a similar pattern of results emerged: the negative relationship between job insecurity and innovative work behavior was significantly mediated by intrinsic motivation (indirect effect = –.10; CI = – .19, –.02), and this negative indirect path was significant at low (–.17; CI = – .29, –.06) but not high (–.04; CI = – .14, .08) levels of mindfulness[1].

Discussion

As perceptions of job insecurity have become increasingly prevalent in the modern workforce and because research has documented its detrimental effects on work-related outcomes, it is important to develop and test theoretical models that help to explain why, how and under what conditions employee effective functioning can be preserved under perceived insecure job conditions. The present study addressed this issue by shedding new light onto the mediating processes and boundary conditions associated with the effects of job insecurity on employee innovative behavior, a work outcome that has received limited attention in the job insecurity literature despite its recognized importance for organizational performance and competitiveness (Gong, Huang, & Farh, 2009). Consistent with our predictions, we found that job insecurity negatively affected innovative work behavior indirectly by reducing employees' intrinsic motivation and that these effects were absent among high mindful employees than among low mindful employees. Importantly, our results indicated that job insecurity predicted work engagement in Studies 1 and 2 and that trait mindfulness moderated the job insecurity–work engagement path in Study 2. However, work engagement was unrelated to innovative work behavior in both studies. These results thus provided evidence for the (conditional) mediating role of intrinsic motivation in the job insecurity–innovative work behavior relationship above and beyond work engagement.

Theoretical implications

This study makes a number of important contributions to the literature. First, we extend the current understanding of the mechanisms linking job insecurity with impaired employee functioning. Indeed, while job insecurity research has largely disclosed the direct and moderated effects of job insecurity on work outcomes, the processes underlying these effects remained largely unexplored. Adopting a "process lens" is nonetheless essential to understand the core psychological reactions that need to be safeguarded to help employees maintain positive functioning under insecure conditions (Lee et al., 2018). Our study answers recent calls to apply such a process focus to the study of job insecurity by providing evidence for a motivational model that explains the detrimental effects of job insecurity on innovative work behavior in light of the mediating role of reduced intrinsic motivation. Thus, our research extends the current literature on the effects of stressful job conditions on innovative behavior.

Second, one key and unique contribution of our study is the identification of trait mindfulness as an individual resource that buffers employees against the demotivating effects of job insecurity and thus allows them to stay intrinsically motivated and innovative. Our results suggest that high mindful individuals can still preserve an intrinsic interest and pleasure in the execution of their job, even if the job is perceived as insecure. As such, they can maintain their motivational fire and, consequently, invest their energy in the execution of innovative behaviors. This finding extends the literature on motivation and innovation at work, which, to date, has mostly focused on the work conditions that enhance employee intrinsic motivation and, ultimately, innovative behaviors (Liu et al., 2016) but disregarded the conditions that help employees to remain motivated and innovative when they face unfavorable job conditions. We extend the prior research in this domain by showing for the first time that trait mindfulness can protect the intrinsic motivation and innovative behavior of employees exposed to a specific adverse job condition, namely, job insecurity.

Finally, our moderation and moderated mediation findings have important implications for the research on mindfulness, motivation and innovation in the workplace. Indeed, based on SDT, scholars have theoretically emphasized the key role of mindfulness in promoting a self-determined functioning, which lies at the core of intrinsic motivation (Brown & Ryan, 2003). However, the contribution of mindfulness to intrinsic motivation had yet to be empirically examined. Likewise, scholars have called for more research exploring the impacts of mindfulness on creativity and innovation since these work outcomes have received limited attention to date (Hyland, Lee, & Mills, 2015). Prior to our investigation, a few studies have examined trait mindfulness as a boundary condition associated with the effects of distress reactions and the underlying stressful conditions on employee innovative behavior (Authors A, blinded for review; Authors B, blinded for review). Precisely, Authors A (blinded for review) showed that high mindful employees were more likely to innovate than their less mindful counterparts in response to low-activated negative affect (i.e., a typical emotional distress reaction). Moreover, Authors B (blinded for review) found that moderate workload was related to increased work engagement and, indirectly, innovative work behavior among employees reporting high levels of trait mindfulness. Our study extends the prior work on mindfulness and innovation by showing that trait mindfulness can also help insecure people preserve a high level of intrinsic motivation, which is a crucial requirement for effective innovation under uncertain job conditions.

Interestingly, our findings revealed that trait mindfulness was unrelated to intrinsic motivation in both studies. Trait mindfulness was also unrelated to innovative work behavior in Study 1 and, surprisingly, was negatively related to it in Study 2. Accordingly, our results suggest that the primary way through which trait mindfulness promotes intrinsic motivation and innovative work behavior is by protecting them against energy-thwarting job conditions. However, these findings also suggest that trait mindfulness might not always be beneficial to

intrinsic motivation and innovation, thereby highlighting the importance of conducting further research to investigate the conditions upon which trait mindfulness might make employees more or less motivated and innovative at work.

Practical Implications

From a practical perspective, employees' willingness to engage in innovative work behavior is essential for an organization to reach its innovative potential and, thereby, achieve a competitive advantage. Our results suggest three pathways through which managers and organizations can maintain their members' involvement in innovative behaviors when facing adverse, insecure job conditions. First, our finding that job insecurity leads to reduced innovative work behavior provides additional evidence to prior research documenting the detrimental consequences of insecure conditions for employees' capacity to show their innovative potential at work. As such, this result implies that organizations expecting and requiring their employees to create new ideas, exert social efforts to obtain approval for ideas and, ultimately, put ideas into practice should take actions to reduce their own experience of job insecurity.

Second, our results indicate that the negative impact of job insecurity on innovative work behavior occurred only through diminished intrinsic motivation. Accordingly, this finding suggests that an important aspect of employee functioning that should be monitored and possibly surveyed by managers is the degree of intrinsic motivation that employees experience when being exposed to insecure job conditions. Such information will indeed provide useful feedback regarding the extent to which employees experience their work activity as inherently interesting or enjoyable. Finally, our results reveal that among job insecure employees, those who report high levels of trait mindfulness experience decreased intrinsic motivation and, ultimately, innovative behavior. Accordingly, an important practical

implication of this study is that managers can take steps to promote and encourage employee mindfulness in order to counteract the harmful effects of job insecurity.

Limitations and Directions for Future Research

Despite the contributions of this study, there are several noteworthy limitations. First, since the measures of job insecurity, trait mindfulness, intrinsic motivation and innovative work behavior came from the same source, our results might be contaminated by common method bias. However, as recommended by methodologists (Podsakoff et al., 2012), we adopted both procedural (i.e., temporal separation between the measurements in Study 1 and Study 2) and statistical (i.e., the latent method factor technique in Study 1) remedies to alleviate such bias. Moreover, while the adoption of a multisource rating would be warranted in future studies in order to counteract method bias, it is worth noting that in the case of innovative work behavior, the use of other ratings may not be recommended. Indeed, employees have more information than their supervisors or peers about the background of their work tasks (Janssen, 2000) and about the degree to which they have generated or championed their ideas to other organizational members (Shalley, Gilson, & Blum, 2009). Research has also shown that self-reported ratings of innovation-related behaviors are consistent with other ratings (e.g., Janssen, 2000). For instance, Axtell et al. (2000) showed that self-ratings of suggestion making ($r = .62$) and innovation implementation ($r = .42$) were significantly correlated with supervisor ratings while Janssen (2000) found a significant correlation between employees' self-rated and supervisor-rated innovative work behavior ($r = .35$). Thus, the use of self-ratings to examine employee innovative work behavior was justifiable.

Second, research has shown that both intrinsic motivation (e.g., Vandercammen, Hofmans, & Theuns, 2014) and innovative work behavior (e.g., Ng & Lucianetti, 2016) are subject to within-individual variations over time, which highlights the relevance of

investigating the mediating effects of intrinsic motivation on the job insecurity–innovative work behavior relationship from a dynamic perspective. Similarly, given the time-lagged nature of our studies, we could not rule out potential reciprocal relationships between intrinsic motivation and innovative behavior. Future research should therefore replicate the current results by adopting longitudinal designs (i.e., panel and diary studies) to examine the trajectory of changes in intrinsic motivation and innovative behavior, as well as to provide more robust evidence for the hypothesized causal effects. Finally, it is worth noting that the average level of job insecurity was relatively low in both Study 1 (M = 1.46, SD = 0.45) and Study 2 (M = 1.85, SD = 0.85), thereby making it likely that the variation of the job insecurity scores was lower. Such relative lower variation, in turn, might have suppressed the relationships between job insecurity and the other study variables. Accordingly, future research should replicate the present investigation on samples that present a higher variability in the level of job insecurity in order to enhance the generalizability of our findings.

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Footnotes

[1] Prior research has shown that job insecurity had curvilinear effects on both motivational states (e.g., Selenko, Mäkikangas, Mauno, & Kinnunen, 2013) and work-related behaviors (e.g., Lam, Liang, Ashford, & Lee, 2015). To rule out this possibility, we therefore examined the quadratic effect of job insecurity on intrinsic motivation and innovative work behavior. Results showed that the quadratic term of job insecurity was unrelated to both intrinsic motivation ($B = .03$, *ns*, Study 1; $B = -.15$, *ns*, Study 2) and innovative work behavior ($B = .09$, *ns*, Study 1; $B = .05$, *ns*, Study 2). After controlling for the quadratic term of job insecurity, the linear relationship between job insecurity and intrinsic motivation remained significant in Study 1 ($B = -.33$, $p < .05$), but turned non-significant in Study 2 ($B = -.09$, *ns*). Since this control variable was unrelated to the criteria while reducing statistical power of the hypothesized predictor, we decided not to include it in the regression model, as recommended by Becker (2005).

Table 1

Descriptive Statistics and Correlations

Variable	*M*	*SD*	1	2	3	4	5	6	7	8	9
Study 1 (N = 138)											
1. Gender	–1.49	–0.50	–								
2. Age	32.97	7.94	–.07	–							
3. Educational level	–3.77	–0.99	–.17*	–.04	–						
4. Organizational tenure	3.93	3.80	–.03	.54**	.02	–					
5. Work engagement (Time 2)	3.80	0.49	.14	.03	.03	.01	(.87)				
6. Job insecurity (Time 1)	1.46	0.45	–.06	–.06	–.17*	–.15	–.23*	(.70)			
7. Trait mindfulness (Time 1)	3.58	0.41	.14	.09	.01	–.06	.12	–.13	(.73)		
8. Intrinsic motivation (Time 2)	3.80	0.71	.11	–.03	.01	–.02	.61**	–.20*	.08	(.85)	
9. Innovative work behavior (Time 2)	3.36	0.71	.14	.01	.06	–.02	.32**	–.02	.08	.32**	(.92)
Study 2 (N = 157)											
1. Gender	–1.39	–0.49	–								
2. Age	33.60	10.19	.19*	–							
3. Educational level	–3.39	–1.11	–.11	–.11	–						
4. Organizational tenure	4.85	4.53	.13	.50**	–.11	–					
5. Work engagement (Time 2)	3.16	0.68	.05	.04	.07	.08	(.90)				
6. Job insecurity (Time 1)	1.85	0.85	–.01	–.10	–.01	–.10	–.27**	(.86)			
7. Trait mindfulness (Time 1)	3.44	0.57	–.05	.09	–.18*	.14	–.05	–.28**	(.87)		
8. Intrinsic motivation (Time 2)	2.94	0.96	.04	.07	.11	.07	.84**	–.22*	–.06	(.91)	
9. Innovative work behavior (Time 2)	2.78	0.79	–.04	–.07	.09	.09	.46**	–.16	–.18*	.50**	(.93)

Note. Internal consistency coefficients (Cronbach's alphas) are reported in parentheses along the diagonal. For Gender: 0 = female,1 = male. For Educational level: 0 = Lower than University education, 1 = University education.*$p < .05$; **$p < .01$.

Table 2

Multiple Regression Results

	Intrinsic Motivation			Work engagement			Innovative work behavior	
Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Study 1 (N = 138)								
Gender	.14 (.12)	.13 (.12)	.14 (.12)	.13 (.08)	.12 (.08)	.12 (.08)	.15 (.12)	.14 (.12)
Age	.00 (.01)	.00 (.01)	–.00 (.01)	.00 (.01)	.00 (.01)	.00 (.01)	.00 (.01)	.00 (.01)
Education	.07 (.30)	.07 (.30)	.07 (.29)	.24 (.20)	.23 (.20)	.23 (.20)	.32 (.29)	.31 (.29)
Organizational tenure	–.01 (.02)	–.01 (.02)	–.00 (.02)	–.01 (.01)	–.00 (.01)	–.00 (.01)	–.00 (.01)	–.01 (.02)
Work engagement							.22 (.15)	.22 (.15)
Job insecurity	–.32* (.14)	–.31* (.14)	–.23 (.15)	–.25* (.09)	–.24* (.10)	–.21* (.10)	–.05 (.14)	–.05 (.14)
Intrinsic motivation							.20* (.10)	.21* (.10)
Trait mindfulness		.07 (.15)	.10 (.15)		.06 (.10)	.06 (.10)		.04 (.15)
Job insecurity × Trait mindfulness			.90* (.34)			.32 (.23)		–.14 (.34)
Total R^2	.05	.05	.10	.08	.08	.09	.14	.14
ΔR^2		.00	.05*		.00	.01		.00
Study 2 (N = 157)								
Gender	.08 (.16)	.06 (.16)	.12 (.16)	.07 (.11)	.06 (.11)	.10 (.11)	–.07 (.11)	–.10 (.11)
Age	.00 (.01)	.00 (.01)	.00 (.01)	–.00 (.01)	–.00 (.01)	–.00 (.01)	–.01* (.01)	–.01 (.01)
Education	.27 (.18)	.22 (.18)	.23 (.18)	.13 (.13)	.10 (.13)	.10 (.13)	.06 (.13)	.00 (.13)
Organizational tenure	.01 (.02)	.01 (.02)	.01 (.02)	.01 (.01)	.01 (.01)	.01 (.01)	.02 (.01)	.03 (.01)
Work engagement							.13 (.15)	.11 (.15)
Job insecurity	–.24* (.09)	–.28** (.09)	–.22* (.10)	–.21** (.09)	–.24** (.07)	–.19* (.07)	–.04 (.07)	–.09 (.07)
Intrinsic motivation							.32** (.11)	.32** (.11)
Trait mindfulness		–.20 (.14)	–.21 (.14)		–.15 (.10)	–.16 (.10)		–.27* (.10)
Job insecurity × Trait mindfulness			.32* (.16)			.24* (.11)		.01 (.12)
Total R^2	.07	.08	.10	.08	.10	.12	.28	.31
ΔR^2		.01	.02*			.02*		.03*

Note. Except for Total R^2 and ΔR^2 rows, entries are unstandardized regression coefficients. Standard errors are provided in parentheses next to the unstandardized regression coefficients. For Gender: 0 = female, 1 = male. For Educational level: 0 = Lower than University education, 1 = University education.*$p < .05$; **$p < .01$.