Abstract

Purpose: The current study investigated the moderating effect of autonomy (individual-level job resource) and social supportive climate (group-level job resource) on the negative relationship between job insecurity and work engagement.

Methodology: Cross-sectional data were gathered and analyzed using Hierarchical Linear Modeling from 3812 participants nested in 116 work units.

Findings: A significant interaction between job insecurity and autonomy offered support for the buffering hypothesis of autonomy. Hypotheses regarding both the direct and the buffering effect of social supportive climate were also supported, suggesting that shared perceptions of a supportive environment can reduce the negative impact of job insecurity on work engagement.

Practical implications: Focus on unit climate can aid practitioners in designing interventions that take into account the effects, and make use of resources that are shared in the work-group.

Originality: This study extends the Job Demands-Resources (JD-R) theory, showing that resources exist not only at the level of the individual, but also a group-level phenomenon, and interact with demands across levels.

Keywords: job demands, job resources, engagement, job insecurity, social support, multi-level
 Research paper

A multi-level model of job insecurity and engagement

Nowadays, employees are expected to offer more effort, skills, and flexibility and receive less in terms of lifetime employment and job security (Moore, 2018). Job insecurity, conceptualized as the degree of uncertainty a person subjectively perceives about his job continuity, or about the stability of certain aspects of the job in the future (De Witte, 2005), becomes an ever-present threat with adverse impact on employee attitudes and affective well-being (Sora, Caballer, Peiro, Silla, and Garcia, 2010). Job insecurity is a demand, involved in a health impairment process that drains the mental and physical resources of the employee, bringing about a state of disengagement (Demerouti, Bakker, Nachreiner, and Schaufeli, 2001). Engagement is characterized by a persistent affective-motivational state in which employees enjoy their work, they are absorbed in tasks, and are dedicated to their job activities (Bakker, Schaufeli, Leiter, and Taris, 2008). This state is highly satisfying, positive, and predicts several favorable outcomes, like better performance and reduced stress levels (Bakker et al., 2008). Thus, identifying buffers that circumvent the negative effect of job insecurity on this motivational state is important both for employees and organizations.

Studies used the Job Demands-Resources theory (JD-R; Bakker and Demerouti, 2017) more often than any other theoretical framework to investigate engagement. However, the empirical evidence supporting its propositions stems predominantly from individual-level studies (Bakker and Demerouti, 2018). Notwithstanding the value of the employee level perspective, it cannot alone explain the complexity of organizational phenomena, where antecedents, moderators, and outcomes reside at different levels of the organization (González-Romá and Hernández, 2017). Multilevel research has identified complementary cross-level processes in organizations (Kozlowski and Klein, 2000). At one hand, higher level variables exert top-down (direct or moderating) effects on individual outcomes, while on the other hand, shared unit properties (e.g., climate) emerge from individuals' experiences, attitudes, perceptions, values, cognitions, or behaviors. These denote elemental content that converge among group members, due to attraction, selection, attrition, socialization, and social interaction processes (Kozlowski and Klein, 2000).

Climate arises as individuals use information from their social environment to construct and interpret reality (Kuenzi and Schminke, 2009), understanding what kind of behaviors are accepted and rewarded by others and the organization, going through a collective sense-making process (Martin *et al.,* 2016). Thus, a positive social interaction process in the form of receiving support from co-workers, creates a collective perception and interpretation of the individual-level resource, which can emerge as a contextual job resource at the work-group level (Ancarani *et al.,* 2019; Füllemann *et al.,* 2016).

The current study proposes a multi-level JD-R model with resources at both employee and department level that counteract the negative effect of job insecurity on work engagement (see Figure 1). An important moderator is proposed in the form of social supportive climate (SSC), defined as shared perceptions that offering and seeking help, and providing emotional or instrumental support when a co-worker is in need, is expected and rewarded in the work unit (Schreurs *et al.*, 2014). We integrate Workplace Social Exchange Network theory (WSEN, Cole, Schaninger, and Harris, 2002), and the JD-R theory to gain a complete theoretical understanding of the way SSC alleviates the negative effects of job insecurity on work engagement across levels. WSEN provides an integrative cross-level theory describing social exchange mechanisms that operate across organizational levels (Cole *et al.,* 2002), and suggests that individuals feel compelled to reciprocate the positive treatment received from the work-unit by being more involved and committed to their work.

Following the JD-R perspective, we also propose that autonomy, conceptualized as 'the scope of influence workers have on how, and what to do at work' (Lopes, Calapez, and Lopes, 2017, p. 499), is an individual-level resource that can keep employees engaged even when they face insecurity. We proposed the buffering effect of autonomy alongside with SSC based on the classical Job Demand-Control-Support Model (JDCS; Johnson and Hall, 1988), which asserts that work situations characterized by high demands, low control and low social support are most harmful to

well-being, and increased autonomy can buffer high demands most effectively under the conditions of high social support.

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INSERT FIGURE 1 ABOUT HERE

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Thus, the main contribution of the present research resides in the extension of the JD-R theory by conceptualizing SSC as emergent, shared job characteristic among employees (Ancarani *et al.,* 2019; Füllemann *et al.,* 2016; Vera *et al.,* 2016). This conceptualization is grounded in the fuzzy composition model (Bliese, 2000), by which we argue that SSC is rooted in the individuals' experience of social support but represents conceptually distinct phenomena. Specifically, whereas research shows that social support at the individual level has a buffering role in the job insecurity-engagement relationship (e.g. Cheng *et al.,* 2014; Getahun Asfaw and Chang, 2019), we advance this knowledge by investigating whether social support at the department-level functions as a resource with the same beneficial effect.

Job Insecurity and Engagement

In the JD-R theory, demands like job insecurity, are postulated to fuel a health impairment process through which mental and physical resources of the employee are drained (Bakker and Demerouti, 2018). This energy-depleting process is associated with a state of disengagement, in which the employee has negative attitudes towards aspects of the work, and distances him/herself from it (Demerouti, et al., 2001). While in the JD-R theory demands are postulated to predict burnout, and lack of resources are the primary antecedent for low levels of engagement, we argue that job insecurity can impair engagement because demands can have the same effect as lack of resources due to the fact that they are dysfunctional in achieving work goals and hinder growth and development (Taris and Schaufeli, 2015). Job insecurity is a threat on the safety and security that is expected from the employer (De Witte *et al.,* 2015). This demand can signal to employees' that their loyalty and dedication is not reciprocated, which has a negative impact on their work engagement

(Parzefall and Hakanen, 2010). Research has gathered empirical evidence concerning the negative effects that job insecurity can have on work engagement (Getahun-Asfaw and Chang, 2019; Vander Elst *et al.*, 2012; Vîrgă and Iliescu, 2017).

    H1.: Job insecurity is negatively related to work engagement.

The Buffering Effect of Autonomy

    The extent to which aspects of the stressors are controllable by the employee can constitute a moderator between the demand and its' effects (Bakker, Demerouti, and Euwema, 2005). This suggests that autonomy does not only have a direct effect on work engagement, but interacts with job insecurity, reducing its negative impact. Job insecurity leads to frustration of the basic need for autonomy and competence because it implies an involuntary and unwanted change concerning ones' job, a situation characterized by lack of clarity and uncertainty over which the employee has no control (De Witte *et al.,* 2015). However, control in other aspects of the job can meet the needs for competence and autonomy and may cancel out the mechanism through which job insecurity decreases engagement (Vander Elst *et al.,* 2012). While there is a large number of studies focusing on the buffering effect of autonomy on a wide variety of demands (e.g., Schreurs *et al.*, 2010; Xanthopoulou *et al.*, 2007), only a handful of studies investigated whether autonomy attenuates the negative effects of job insecurity. The limited empirical evidence shows that job control interacts with job insecurity predicting vigor (Cheng *et al*., 2014), and organizations might temper the negative effects of insecurity by creating job conditions that allow employees more control over their work (Schreurs *et al*., 2010).

    H2: *Autonomy buffers the negative relationship between job insecurity and work engagement.*

The Cross-Level Effect of SSC

    In a social supportive context, employees offer and receive mutual mental and physical assistance through emotional, informational, and instrumental support (Cole *et al.,* 2002). In work

units where seeking and providing support is a taken-for-granted everyday behavior employees may develop mutual experience of belonging, sense of cooperation, unity, and commitment (Bacharach and Bamberger, 2007). When supportive behaviors are expected in the work unit, might reinforce and encourage positive actions, increasing the frequency of positive emotional experiences that are not only lived at the individual level of the givers and recipients of help but are propagated to those who witness the interactions, and through emotional contagion to those who interact with them (Kramer, Guillory, and Hancock, 2014). Finally, generalized perceptions of available support can be even more beneficial for well-being, than concrete, received support (Thoits, 2011), suggesting that SSC could enhance engagement through the shared belief that employees have access to resources through the support that is offered in the work unit. Employees in such social environments have to greater extent access to information and resources to complete work tasks. Following the JD-R perspective, SSC is a second order resource that generates and protects other resources (Ancarani *et al.,* 2019). This resourceful environment can motivate the employee and can satisfy the need for relatedness, resulting in higher levels of work engagement (Bakker and Demerouti, 2018). Research has linked positive and supportive climate to outcomes such as well-being, job satisfaction, and engagement (Kuenzi and Schminke, 2009).

H3: SSC at the group level is positively related to work engagement.

The Buffering Effect of SSC

From a social exchange perspective, employees who feel protected by the workgroup and perceive that they receive meaningful resources from colleagues might want to reciprocate the support by working more vigorously and dedicated to achieving work goals, even in the case of insecurity (Cheng *et al.*, 2014). WSEN theory argues that there is an exchange network that operates across levels in organizations (Cole *et al.*, 2002). Employees receive support, security, and different kinds of benefits, and they reciprocate with higher performance, attendance, loyalty, and positive attitudes. When employees experience insecurity in their jobs, they can withdraw and

disengage due to the unbalanced exchange situation, where the organization does not offer stability and security in exchange for dedication (De Witte, 2005). However, in socially supportive groups, the repeated positive emotional experiences may substitute missing exchange "currencies" from the organization, and employees keep being engaged to „repay" the group because salience of any specific exchange is based on the context and currencies that one party can offer become relevant in light of the other party's needs (Cole *et al.*, 2002).

Such an interaction mechanism that reduces the negative effect of demands is also consistent with the JD-R theory, which has guided vast research on interactions between various demands and resources (Bakker *et al.,* 2010; Cheng *et al.*, 2014; Xanthopoulou *et al.*, 2007). Research regarding climate as job resource (Ancarani *et al.,* 2019) that interacts with individual level demands, showed that justice climate moderates the adverse effects of job insecurity on different employee-level outcomes (Sora *et al.,* 2010).

H4: SSC at the group level buffers the negative relationship between job insecurity and work engagement at the individual level.

Method

Participants and procedure

Data collection. The data was collected by a Monitoring and Statistical Consulting company from Belgium, which specializes in the measurement of occupational stress for Belgian Health and Safety Executives. All participants completed self-reported questionnaires. No members of a surveyed organization had access to any of the completed questionnaires to guarantee anonymity.

The sample included 3812 participants nested in 116 work units from 19 organizations. We included in the analysis only clusters with a minimum of 10 participants (Clarke and Wheaton, 2007); the average cluster size being m = 32.8.

Sample characteristics. Participants' (60% male) age was distributed: 4.9% were under 25 years, 30.4% had ages between 25 and 34 years, 28.5% between 35 and 44, 24% between 45 and

54, and 12.1% were over the age of 55. Average tenure was 13 years (SD = 10.7). 79.5% of participants worked full time.

56.2% completed high school, 30.6% had a bachelor's degree, and 13.2% had a master's or higher degree. 69.8% were white-collar workers, 18.1% were blue-collar workers, 7.9% worked in middle or higher management, and 1.4% of the sample represents teaching staff. 10% of the participants were public servants and self-employed professionals. The participants operated in a variety of industries: electricity, gas, steam and air conditioning supply, wholesale and retail trade; administrative and support services; manufacturing; public administration and defense; compulsory social insurance; financial and insurance activities; arts and entertainment.

Measures

Work engagement was measured with three items from the Utrecht Work Engagement Scale (UWES-3; Schaufeli *et al.*, 2019), that assess: vigor ("At my work, I feel bursting with energy."), dedication ("I am enthusiastic about my job"), and absorption ("I am immersed in my work."). Participants responded on a scale from 1 = "never" to 7 = "every day" (α = .84).

Job insecurity was measured with three items (De Witte 2005) participants rating their insecurity on a scale from 0 = "always" to 3 = "never" ("The chance exists that I will lose my job in the near future."; "I feel insecure about the future of my job"; "I think I will lose my job in the near future."; α=.91). Scores on this scale were recoded before the analysis to align them with the other measures.

Autonomy was measured with a three-item subscale of the Short Inventory to Monitor Psychosocial Hazards (SIMPH; Notelaers *et al.,* 2007). Participants rated their autonomy ("Do you have an influence on the pace of work?"; Can you interrupt your work for a short time if you find it necessary to do so?"; "Can you decide on your own the order in which you carry out your work?"; α = .74) on a scale from 0 = "never" to 3 = "always".

SSC was measured with a three-item subscale from the SIMPH that focused on perceived social support ("Can you count on your colleagues when you come across difficulties in your work?"; "If necessary, can you ask your colleagues for help?"; "In your work, do you feel appreciated by your colleagues?"; $\alpha = .81$), on a scale from 0 = "never" to 3 = "always". This measure was then aggregated to the unit level, following a direct-consensus model of composition (Chan, 1988), by which individual responses are pooled to represent the climate construct. This aggregation was based on the notion of fuzzy composition (Bliese, 2000), which entails that the aggregate variable maintains conceptual links to the individual level measure, but in the same time represents a distinct construct. To justify the aggregation of social support to the department-level, we established inter-rater agreement (r_{wg}; Lebreton and Senter, 2008), and non-independence (ICC, Bliese, 2000).

Statistical approach

We analyzed the data by Hierarchical Linear Modeling using Maximum Likelihood Estimation with robust standard errors in MPlus (Muthén and Muthén, 2012). In the first step, we ran a null-model and assessed the criterion variability imposed by unit membership using the ICC. In the next step, we added the level 1 predictors (i.e., job insecurity and autonomy). In step 3, we added the interaction term to assess the moderating effect of autonomy. In step 4, we allowed the slopes of the relationship between job insecurity and work engagement to vary randomly. In step 5, we used the level-2 variable (SSC) to predict the intercept of work engagement. In the final step, we tested the cross-level moderating effect of SSC by testing if it predicts the job insecurity-engagement slope. We centered the level-2 predictor around the grand mean and the level-1 predictors around the group-mean, to obtain clearly interpretable interaction terms (González-Romá and Hernandez, 2017). We calculated pseudo R^2 on the total, within-, and between-level variance to gauge incremental variance explained.

Results

Means, standard deviations, scale reliabilities, and correlations for key study variables are summarized in Table 1.

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The *rwg* index for our measures of social support was (*rwg* = 0.89) well above the recommended threshold (Lebreton and Senter, 2008), suggesting that there is a high inter-rater agreement on the degree of social support. The ICC for social support had a value of ICC = 0.08 and for engagement ICC = 0.10. Hence, there is about 10% of the variance in work engagement explained by department-level differences, which justifies the multi-level analysis of our data.

In terms of model fit, we observed a progressive decrease in both Akaike's information criterion (AIC) values, and Bayesian information criterion (BIC) values suggesting that model fit improves after each step of model building. We also calculated a chi-square (χ^2) deviance statistic which showed significant improvement in the model after each step.

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Table 2 reports the results of hierarchical linear regression in each step of model building. The results support H1, showing a significant negative relationship between job insecurity and work engagement (γ_{10} = -.37, $p < .001$).

The data also sustain H2, which referred to the buffering effect of autonomy in the relationship between job insecurity and engagement. The job insecurity-autonomy interaction term is a significant predictor for engagement (γ_{30} = .14, $p < .001$). This significant interaction was also confirmed by a simple slope analysis, which yielded a significant difference between the slopes of job insecurity-engagement in high versus low autonomy conditions (high autonomy: β = -.25, p <.001; low autonomy: β = -.46, p <.001; $t(7620)$ = 3.52, p <.001).

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The data sustains H3, showing that higher levels of SSC at the department level predict higher engagement (γ_{01} = .59, p = .003). Before testing the fourth hypothesis, we first investigated whether the job insecurity-engagement slope varies randomly from one work unit to another. We found that this variation is significant (μ_{1j} = 0.03, p = .048), which suggests that the relationship between engagement and job insecurity differs among work units. H4, proposing a cross-level moderating effect of SSC also gained full support. The L2 variable significantly predicted the job insecurity-engagement slope (γ_{11} = .41, p = .008). The simple slope analysis yielded a significant difference between the slopes in the low SSC and high SSC conditions (high SSC β = -.40, p < .001; low SSC β = -.62, p < .001; $t(7620)$ = 2.07, p = 0.03). Hence, the relationship between job insecurity and work engagement is significantly weaker in departments with high SSC. The graphic representation of the cross-level moderation is very similar, to that of the L1 moderation effect, hence for the directionality of this effect see Figure 2.

Beyond the 10% variance explained by cluster differences, all predictors in the model could explain about 8.7% of the total variance in engagement scores. The direct effects of L1 predictors explain 6.6% of the total variance (pseudo R^2 = .066) and adding the L1 interaction increases this by 0.3% (pseudo R^2 = .003). Modeling the contextual effect of supportive climate explains another 1% of the total variance of engagement, and 8.4% (pseudo R^2 = .084) of the L2 variance of engagement.

Discussion

The present research extends the JD-R theory by conceptualizing and modeling resources from multiple levels of analysis. Thus, we tested a multi-level model in which autonomy at the individual level, and SSC, aggregated at the department level, were hypothesized to moderate the negative effects of job insecurity on employee work engagement.

The results supported H1, replicating a large body of empirical evidence demonstrating the negative association between job insecurity and engagement (Cheng *et al*., 2014; Getahun Asfaw and Chang, 2019; Vander Elst *et al.,* 2012; Vîrgă and Iliescu, 2017). This result also underlines the JD-R theory postulate concerning the negative effect of demands (Bakker *et al*., 2017). Employees experiencing job insecurity perceive that the employer does not offer the stability that is expected in this particular exchange relationship and, in response to this, they withdraw and disengage from the job (De Witte, 2005; Parzefall and Hakanen, 2010). They also experience more anger, frustration, and negative affect which limits their capacity to maintain a positive motivational-affective state (Sora *et al.,* 2010).

The data also supported H2 showing that the higher degree of autonomy employees have in their work, the higher levels of engagement they experience, even when they feel that their jobs might be in danger. In the JD-R theory, job demands are less stressful when employees have higher control over their work, because this resource can satisfy the basic needs for autonomy and competence (Bakker *et al.,* 2008). Employees who have the liberty to decide and act independently, can feel more in control and more competent, and since resources become more salient in the face of job demands (Bakker *et al.,* 2005), this sense of competence and control can become especially important in the face of uncertainty generated by job insecurity. Thereby, the findings contribute to the ever-growing body of evidence that underlines the buffering potential of autonomy in the face of job demands (Bakker *et al.,* 2005; Schreurs *et al.*, 2010; Xanthopoulou *et al.*, 2007).

The most important finding of the study resides in the significant cross-level effects of SSC (H3 and H4). The main effect of SSC replicates previous research conducted by Vera and colleagues (2016), who showed that the aggregated measure of social support predicts higher levels of engagement. When employees are part of supportive units where they feel protected, and are more likely to work vigorously, dedicated, and absorbed. Being part of a work-unit characterized by supportive relations can provide the sense of belongingness (Bakker & Demerouti, 2017), security, and stability that the employee needs most in times of job insecurity (Sora *et al.,* 2010). This

reasoning can also explain the cross-level buffering effect of SSC. The data showed that employees nested in departments where a shared perception exists that co-workers offer help in times of need, were less likely to be hindered by the subjectively perceived insecurity of their jobs.

The shared belief that one can expect support, even, in the case of having an insecure job, reduces stress because there is a common understanding that "we support each other" in the work unit. Employees receive a valuable resource from colleagues that they feel obliged to reciprocate, and one way to "repay" the group is to engage in work and commit to the common goals (Cole *et al*., 2002). Thus, context is important, as it shapes the meaning and salience of events that individuals face in organizations, and our results reinforce previous findings which established climates generally viewed as positive (e.g., supportive, ethical, participative), as reliable predictors of positive outcomes (Kuenzi and Schminke, 2009). Hence, social support is not only a powerful individual-level resource that has been widely investigated in the JD-R research, but it can be conceptualized as a shared, higher-level resource (Ancarani *et al.,* 2019; Sora *et al.,* 2010) that has the buffering effects postulated in the model.

Strengths, limitations and future research

Beyond the theoretical advancement of the JD-R theory, the present study also has a strong point from a methodological point of view. First, there is a variety of industries represented by a relatively large number of organizations, reinforcing the generalizability of our results. This brings additional evidence to the assertion that the JD-R model is an overarching theory that has applicability in a large diversity of occupations (Bakker and Demerouti, 2018). Second, using multilevel-modeling, we overcome shortcomings of simpler data analysis techniques (e. g., traditional OLS regression), which tend to produce incorrect estimations of standard errors and spurious results in the face of nested data structures (Raudenbush and Bryk, 2002).

Like any study, the present research has some shortcomings. First, the cross-sectional nature of the data, and the use of self-report questionnaires increases the concern that results might be affected by common method bias (Podsakoff *et al*., 2012). However, as job insecurity, the

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perception of support in one's group, and engagement are highly subjective, self-reports are justifiable measures of these concepts. Future research on this issue could overcome this limitation by the use of multi-source data. Longitudinal measures could help investigate causal relationships between job insecurity, engagement, autonomy and SSC. Most interestingly, the emergence of unit climate is a future research avenue that has been scarcely explored, and can most benefit from longitudinal investigations of the processes that lead to the formation of climate (Kozlowski & Klein, 2000).

Furthermore, while the direct consensus model, which is the aggregation of individual social support measures to a higher level based on the *rwg* and ICC indices is the most popular form of composition model in multi-level research (Chan, 1998), one can argue that referent shift composition and the measure of individual psychological climate, instead of individually perceived actual social support, could yield a more valid measure of climate. However, we theoretically explain the formation of climate through the concept of emergence, and elemental content that constitutes the basis for emergence of climate includes not only individual psychological climate, but also perceptions, behaviors, and affect at the level of the individual (Kozlowski and Klein, 2000). Moreover, the fuzzy composition model that we chose to underline the aggregation of L1 data to the higher-level states that aggregation changes L1 measures into a construct that includes shared unit-properties (Bliese, 2000).

Another limitation resides in the relatively small effect sizes of the interactions. However, these are not uncommon in the literature (Bakker *et al.,* 2005, 2010; Brough and Brigss, 2015), and usually happens in JD-R models where interactions are postulated between any pair of demands and resources. While these interactions are often statistically significant, they become more frequent and practically relevant in the case of qualitatively matching demands and resources (DeJonge and Dorman, 2006).

Future studies could add to our current knowledge, by investigating the processes through which resources at a higher organizational level impact essential phenomenon that occur at a lower

level (Bakker and Demerouti, 2018). One plausible theoretical explanation is based on Broaden and Build Theory (Fredrickson, 2013), which suggests that employees cope better with job insecurity and keep on working engaged due to the positive emotions elicited by a supportive climate and the broadened mindsets and personal resources created by these emotions.

Implications for theory and practice

The present research brings a significant contribution to existing knowledge by simultaneously focusing on resources that reside on different organizational levels. By including a contextual resource in the form of SSC, we model group-level influences that can reduce the negative impact of job insecurity. The focus on climate as group-level job resource is important, because it can constitute a second-order resource that is instrumental in obtaining and protecting other resources that drive development, growth and goal achievement at the individual level (Ancarani *et al.,* 2019).

Resources that reside at the group level, not only have an impact on individual-level outcomes targeted in interventions, but they can proactively be used to facilitate change (Martin *et al*., 2016). "Shared or group-level constructs can be invaluable (albeit often neglected) intervention resources" (Martin *et al*., 2016, p. 206), because focus on both intra-individual and inter-individual resources makes a more apparent distinction between the experiences of each individual and those shared among individuals working in the same work-unit (Martin *et al*., 2016).

Conclusions

The current study proposes a multi-level JD-R theory, suggesting that individual and department-level resources coexist and interact with job demands in predicting employee well-being. The proposed model gained support in an extensive and varied dataset, which contributes to the generalizability of the results. By designing jobs that allow autonomy in work tasks, organizations can aid employees who doubt the security of their jobs. Most importantly however, going beyond the level of the employee, and reinforcing a supportive climate in work units can mitigate the adverse impact that job insecurity has on work engagement. Employees do not share

only the environment and the tasks, but also the resources that fuel their engagement and help them

face demands.

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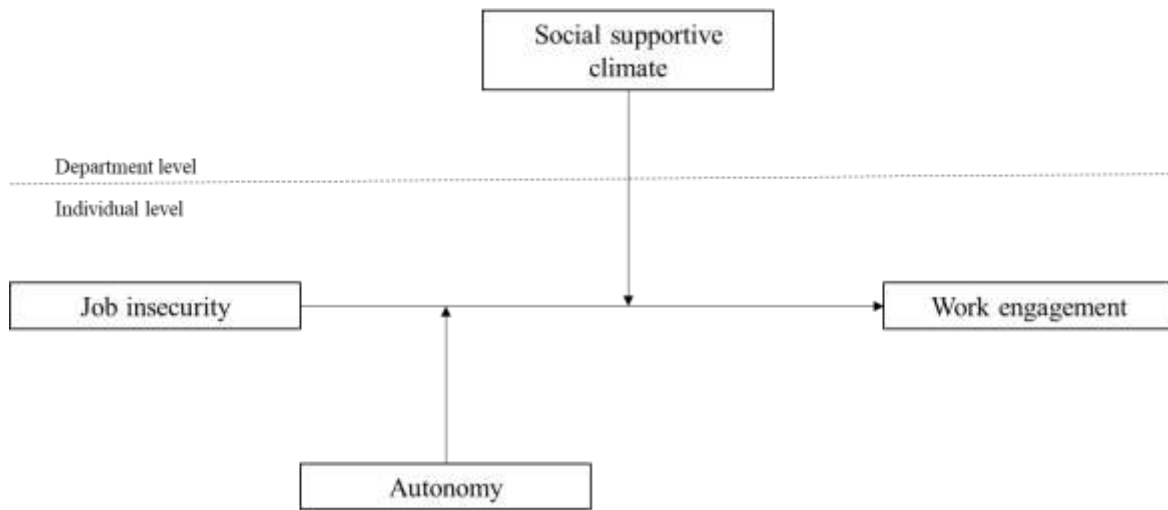
Figure 1. Hypothetical model
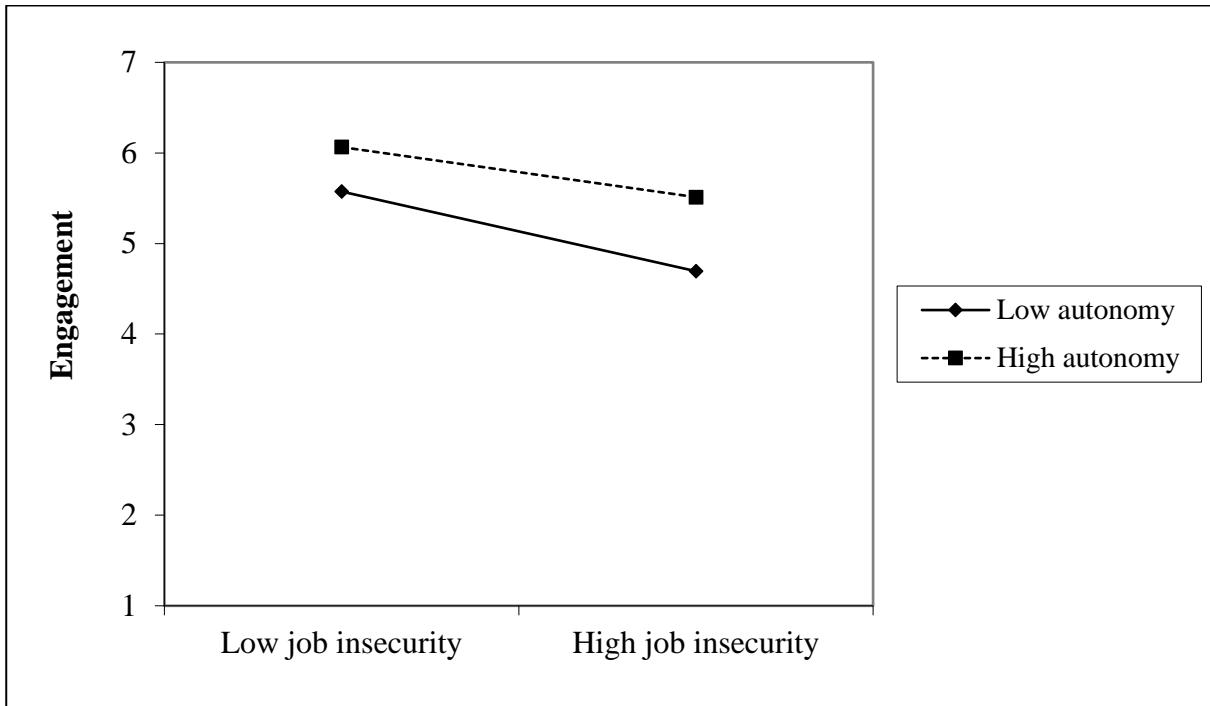
Figure 2. Level-1 interaction

Table 1

Correlations, Reliabilities and Descriptive Statistics for Variables

	M (*SD*)	α	Autonomy	Engagement	Social Support (L1)	SSC
Job insecurity	.83 (.86)	.91	-.32***	-.34***	-.10***	-.12***
Autonomy	1.49 (.73)	.74		.30***	.20***	.02
Engagement	5.26 (1.56)	.91			.21***	.09***
Social support (L1)	1.96 (.70)	.81				.31***
SSC	1.96 (.21)	-				

Notes. $N = 3812$. *** - $p < .001$;

Table 2

Results of Multilevel Analysis

Level and variable	Null model (step 1)	Main effect of L1 predictors (step2)	Model Interaction between L1 predictors (step 3)	Random slope (step 4)	Main effect of L2 predictor (step 5)	Cross-level interaction (Step 6)
Level 1						
Intercept (γ_{00})	5.42(.05)***	5.42(.05)***	5.42(.05)***	5.42(.05)***	5.43(.05)***	5.43(.05)***
Job insecurity (γ_{10})		-.37(.04)***	-.57(.07)***	-.51(.06)***	-.52(.07)***	-.51(.06)***
Autonomy (γ_{20})		.40(.04)***	.28(.05)***	.30(.05)***	.29(.05)***	.29 (.05)***
Job insecurity*Autonomy (γ_{30})			.14(.03)***	.12(.04)**	.12(.04)**	.12(.04)**
Level 2						
SSC (γ_{01})					.59(.20)**	.61(.18)***
Cross-level interaction						
Job insecurity*SSC (γ_{11})						.41(.15)**
Variance components						
Within-team (L1) variance (ε_{ij})	2.04(.11)***	1.88(.08)***	1.87(.08)***	1.86(.08)***	1.86(.08)***	1.85(.08)***
Intercept (L2) variance (μ_{0j})	.24(.05)***	.24(.06)***	.24 (.05)***	.24(.05)***	.22(.049)***	.22(.05)***
Slope (L2) variance (μ_{1j})				.03(.01)*	.03(.01)*	.03(.01)
Intercept-slope (L2) covariance				.02(.02)	.01(.02)	.01(.02)
ICC	.105					
Akaike (AIC)	13708.92	13413.63	13399.23	13395.415	13389.06	13385.09
ΔAIC		-295.28	-14.40	-3.81	-6.35	-3.96
Bayesian (BIC)	13718.12	13428.98	13417.64	13419.96	13416.67	13415.78
ΔBIC		-289 14	-11.3	2.31	-3.28	-.89
Number of free parameters	3	5	6	8	9	10
χ^2 (degrees of freedom)		368.12(2)***	14.58(1)**	10.00(2)**	8.69(1)**	5.26(1)*
Pseudo R² total		0.066(6.6%)	0.003(0.3%)	0.007 (0.7%)	0.01 (1%)	.001 (0.1%)
Pseudo R² within		0.077(7.7%)	.004(0.4%)	.007(0.7%)		
Pseudo R² between					.084(8.4%)	

Note: L1 = level 1; L2 = level 2; Robust standard errors of estimates are in parentheses; ***- significant below p<.001; ** significant below p<.01; * - significant below p<.05.