Journal of Management & Organization, 19:3 (2013), pp. 279–296

doi:10.1017/jmo.2013.35

Distributive justice, job stress, and turnover intention: Cross-level effects of empowerment climate in work groups

Byoung Kwon Choi,* Hyoung Koo Moon,† Eun Young Nae‡ and Wook Ko§

Abstract

This paper, with its multilevel design including 90 work groups in South Korea, proposes and examines how distributive justice relates to job stress, and thus leading to turnover intention at the individual level, and how this relationship is affected by empowerment climate at the group level. The results of hierarchical linear modeling show that employees' perception of distributive justice was negatively related to job stress. We also find that job stress partially mediated the influence of distributive justice on turnover intention. In addition, at the work group level, the empowerment climate decreased employees' job stress, and the negative relationship between distributive justice and job stress at the individual level was moderated by the empowerment climate. The theoretical and practical implications are discussed.

Keywords: distributive justice, job stress, turnover intention, empowerment climate

Received August 2011. Accepted September 2012

Organizational justice is a key concern in the field of organizational behavior. Many previous theoretical and empirical studies show that employees' perception of the fairness of their reward significantly affects their attitudes and behaviors (Colquitt, Conlon, Wesson, Porter, & Ng, 2001). Among the types of organizational justice, distributive justice has been a hot issue. Distributive justice refers to the employees' evaluation of the fairness of the rewards (e.g., pay, promotion) they receive from the organization are consummate with their contribution or performance (Niehoff & Moorman, 1993). If employees perceive that their rewards are unjust compared to coworkers, their positive attitudes or behaviors for organization (e.g., organizational commitment, trust, and organizational citizenship behavior) will be decreased (Colquitt et al., 2001; Cropanzano, Byrne, Bobocel, & Rupp, 2001).

When distributive injustice occurs, turnover is likely to happen, since turnover is one of the means an employee can take a proactive step to remedy the injustice. In fact, many prior justice theorists have addressed how employees' perception of distributive justice affects their turnover intention (Aquino, Griffeth, Allen, & Hom, 1997; Aryee, Budhwar, & Chen, 2002). Cohen-Charash and Spector (2002), in their meta-analysis, found that distributive justice, among the three types of organizational justice (e.g., distributive, procedural, and interactional) has the strongest positive influence on turnover intention.

* Division of Business Administration, College of Business, Sangmyung University, Seoul, South Korea
† Korea University Business School, Korea University, Anam-Dong, Seongbuk-Gu, Seoul, South Korea
‡ Carlson School of Management, University of Minnesota, Minneapolis, MN, USA
§ LG Electronics Inc., Culture Team, Cheongho-ri, Jinwi-myeon, Pyeongtaek-si, Gyeonggi-do, South Korea
Corresponding author: jrpfeffer@smu.ac.kr

Nonetheless, it is somewhat unclear why and when distributive justice affects turnover intention. First, most of the existing studies on the relationship between organization justice and turnover intention have been focused on procedural and interactional justice rather than distributive justice (e.g., Elovainio et al., 2005). Thus, surprisingly, the relationship between distributive justice and turnover intention has not been sufficiently explored. Second, the theoretical explanatory mechanisms for the influence of distributive justice on turnover intention have not been fully examined. As noted above, most previous studies have found a variety of mediators including the perceived organizational support (Masterson, Lewis-McClear, Goldman, & Taylor, 2000), trust (Masterson et al., 2000; Aryee, Budhwar, & Chen, 2002), leader–member exchanges (Karriker & Williams, 2009) on the relationship between procedural or interactional justice and turnover intention. However, the theoretical mediating mechanisms underlying the relationship between distributive justice and turnover intention is less clear.

In this regard, the purpose of the present study is twofold. First, we try to examine the less-explored relationship between distributive justice and turnover intention. In particular, we pay attention to the mediating effect of *job stress* on this relationship. Unfairness in the organization can cause job stress, since unfairness can be a stressor that causes employees to doubt their ability to perform well, and also influence their psychological and physical health (Maslach, Schaufeli, & Leiter, 2001; Tepper, 2001; Elovainio et al., 2005; Moliner, Martinez-Tur, Peiro, Ramos, & Cropanzano, 2005). In fact, although job or role-related factors, such as role ambiguity, role conflict, and workload, have been well examined as determinants of employees' stress (e.g., Lee & Ashford, 1996; LePine, LePine, & Jackson, 2004; Newton & Jimmieson, 2008; Hung, Fisher, Gapp, & Carter, 2012), there is a lack of attention on empirical studies on the effect of distributive justice as a predictor of job stress (Halbesleben & Buckley, 2004; Judge & Colquitt, 2004).

The second purpose is to identify the cross-level moderating effect of organizational climate that is a boundary condition affecting the relationship between distributive justice and its outcomes at the individual level. Employees' job stress may be influenced by organization or group-level factors (e.g., climate) (Cooper, Cooper, & Eaker, 1988). In this respect, we can expect that, although employees' perception of distributive justice affects their job stress at the individual level, this relationship may be different, according to *organizational climates*. More specifically, we suggest that *empowerment climate* at the group level affects the relationship between employees' perception of distributive injustice and job stress. Seibert, Silver, and Randolph (2004) suggested that an empowerment climate that provides autonomy, information sharing, and team accountability positively relates to employees' attitudes and behaviors toward their organization. In this study, we consider empowerment climate as a moderator at the work-unit level that influences the relationship between distributive justice and job stress at the individual level. Although a few empirical works (e.g., Seibert, Silver, & Randolph, 2004; Chen, Kirkman, Kanfer, & Allen, 2007a; Chen, Lam, & Zhong, 2007b; Si & Wei, 2012) have theorized or tested the role of empowerment climate, the present study on cross-level effects of empowerment climate will contribute to the justice and empowerment literature by identifying the boundary condition affecting the influence of distributive justice on employees' attitudes.

THEORETICAL BACKGROUNDS AND HYPOTHESES DEVELOPMENT

A variety of justice theories attempt to explain the effect of distributive justice. For instance, a referent cognitive theory, the instrumental model (or self-interest theory), and the group value model have been frequently used for explaining the effects of distributive, procedural, and interactional justice (Brockner & Wiesenfeld, 1996; Cropanzano et al., 2001). However, we think that the theoretical rationales addressing the relationship between distributive justice, job stress, and turnover intention are somewhat different from these prevailing theories. Accordingly, although we basically use the

https://doi.org/10.1017/jmo.2013.35 Published online by Cambridge University Press

prevailing justice theories mentioned above, we set the hypotheses through simultaneously integrating other justice-related theories (e.g., social comparison theory, uncertainty management theory) as well as job stress-related theories (e.g., conservation resource model, job demand, and resource theory).

The relationship between distributive justice and job stress

Adams' (1965) equity theory is considered as one of the most popular theories to explain how distributive justice operates in an organization. The equity theory proposes that employees compare the ratio of their own reward and effort to the ratios of reward and effort of others. Through this comparison process, when employees perceive that their ratios are unequal, they will feel relative deprivation or discontent (Martin, 1981). This psychological distress can lead to dysfunctional attitudes or behaviors, including turnover, as a way of restoring the inequity.

As one form of psychological distress, job stress can occur when employees feel distributive injustice. Parker and DeCotiis (1983: 165) defined job stress as 'the feeling of a person who is required to deviate from normal or self-desired functioning in the work place as the result of opportunities, constraints, or demands relating to potentially important work-related outcomes.'

There are some theories linking distributive justice and job stress. First, uncertainty management theory provides the clue for such relationship (Lind & van den Bos, 2002; van den Bos & Lind, 2002). Employees usually face uncertainty concerning their incentives, promotions, and employment security. These uncertainties lead employees to anxiety and psychological distress (Judge & Colquitt, 2004). Therefore, employees usually have the strong need and desire to reduce uncertainty. Meanwhile, whether the organization provides a fair and just reward to employees in return for their contributions is an adequate informational signal to employees (Lind & van den Bos, 2002). Thus, if employees perceive that their organization is fair and consistent in the distributional sense, their uncertainty will be decreased. In other words, distributive justice can reduce employee uncertainty.

Second, job stress and job burnout literature also provide rationales for our expectation. For instance, the effort–reward imbalance model proposed that the inconsistency between employees' efforts and rewards for those efforts cause job stress (Cole, Bernerth, Walter, & Holt, 2010). That is, if employees are fairly rewarded for their efforts, then they would not experience job stress; however, if they receive an unfair reward, they may feel job stress. The theory of conservation of resources (Hobfoll, 2001; Schaufeli, 2006) also posits that stress and burnout occur when employees perceive threats to their valuable resources. Here, resources are defined as 'those objects, personal characteristics, conditions or energies that are valued in their own right or that are valued because they act as conduits to the achievement or protection of valued resources' (Hobfoll, 2001: 339). Thus, according to this theory, stress is a result of a threat to resources (e.g., the perception that one might lose his or her job), the actual loss of a resource (e.g., the loss of the job), and insufficient gain of additional resources.

Supposing that fair reward for one's efforts can be a type of resource, when employees receive a low reward (i.e., resources) for their efforts, they may feel stress. In this sense, Maslach, Schaufeli, and Leiter (2001) and Halbesleben and Buckley (2004) proposed fairness as a possible predictor of job burnout. They argued that, even though employees made a great effort for excellent performance and actually achieved desirable results for their organization, if they do not receive a reasonable reward from the organization, they may feel that they cannot do anything to contribute to the outcome. Cole et al. (2010) also suggested that employees in an unjust or unfair working environment will have a lack of resources, and thus be more vulnerable to distress. Likewise, the lack of fairness may bring job stress since employees might get upset and feel exhausted.

In addition, some existing empirical studies support the significant relationship between distributive justice and job stress. Tepper (2000) found that distributive justice was negatively

https://doi.org/10.1017/jmo.2013.35 Published online by Cambridge University Press

correlated with psychological distress (e.g., anxiety, emotional exhaustion, depression). De Boer, Bakker, Syroit, and Schaufeli (2002) showed that distributive injustice increased employees' health complaints. Janssen (2004) found that distributive justice decreased the job-related anxiety and burnout. Walster, Berscheid, and Walster (1973) also proposed that employees' perception of an unequal exchange relationship with the organization can cause psychological tension and distress. Taken together, we propose the following hypothesis:

Hypothesis 1: Employees' perception of distributive justice would be negatively related to their job stress.

The mediating effect of job stress

Many justice theorists have well addressed how employees' perception of distributive justice affects their turnover intention (Aquino et al., 1997; Aryee, Budhwar, & Chen, 2002; Cohen-Charash & Spector, 2002; Hechanova, Amampay, & Franco, 2006). According to the justice theories (e.g., Brockner & Wiesenfeld, 1996), when employees are rewarded unfairly compared to their input or contribution, they may think that their organization is unreliable and does not respect them. Accordingly, employees' need to maintain the membership within the organization would be decreased (Lavelle, Rupp, & Brockner, 2007). Colquitt et al. (2001) showed in their meta-analysis on organizational justice that distributive justice had the strongest influence on employees' withdrawal behavior than any other type of justice (e.g., procedural, interactional, and informational justice).

In the literature of job stress, the influence of job stress on employees' turnover intention has been subjected to much empirical scrutiny (e.g., Lee & Ashford, 1996; Cole et al., 2010). Tepper (2001) argued that depletion of adequate resources in return for employees' efforts may bring them to stressful situations, and eventually cause emotional exhaustion. Lee and Ashford (1996), in their meta-analysis, demonstrated that emotional exhaustion had a very high correlation with turnover intention.

Moreover, when seen in terms of social comparison process (Festinger, 1954), employees' job stress caused by distributive injustice may increase their turnover intention. When compared with others, if employees are less paid or unfairly treated compared to others, this comparison may serve as a stressful situation. In this case, employees who feel injustice in social exchange relationships with the organization may lack the motivation to maintain a relationship with the organization (Maslach, Schaufeli, & Leiter, 2001; van Dierendonck, Schaufeli, & Bunnk, 2001).

Taken together, distributive injustice, which is a predictor of job stress, may cause employees' negative attitudes toward their organization. As such, it is expected that employees' perception of distributive justice will be negatively related to job stress, which in turn will decrease their turnover intention. Cole et al. (2010) found that emotional exhaustion mediated the influence of distributive injustice on turnover intention. Schaufeli (2006) also have proposed that, when employees feel distributive injustice, they will withhold their efforts or psychological attachment in their organization to reduce stress and restore unfair treatment by increasing turnover intention. Accordingly, we expect that employees' perception of distributive justice reduce the job stress, and in turn decrease their turnover intention. This prediction is consistent with a mediation model.

Hypothesis 2: Employees' job stress would mediate the relationship between distributive justice and turnover intention.

Empowerment climate

Empowerment means the delegation of managers' authority to the employees, and thus, employees make decisions regarding their work with their own willingness and competence (Conger & Kanungo, 1988; Seibert, Silver, & Randolph, 2004). Thus, the empowerment is related to

https://doi.org/10.1017/jmo.2013.35 Published online by Cambridge University Press

self-determination and intrinsic motivation (Deci & Ryan, 1985; Conger & Kanungo, 1988; Liden & Tewksbury, 1995; Holdsworth & Cartwright, 2003; Zhang & Bartol, 2010), because individuals who feel a higher level of empowerment may also feel a greater degree of intrinsic control or self-generated motivation to perform well (Spreitzer, 1995; Liden, Wayne, & Sparrowe, 2000; Chen, Lam, & Zhong, 2007b). Indeed, there have been many empirical studies showing the positive influence of empowerment on employees' work attitudes and performance. For instance, Spreitzer, Kizilos, and Nason (1997) found that the empowered employees had lower job stress. Hechanova, Amampay, and Franco (2006) showed that employees' perception of empowerment was positively related to job satisfaction and performance. Moye and Henkin (2006) also found that employees who feel empowered in an organization have higher trust in their leaders.

Like this, at the individual level, employees' psychological empowerment has been well studied. Psychological empowerment is defined as an individual's experience of intrinsic motivation that is based on cognitions about themselves in relation to their work (Spreitzer, 1995, 2007). However, individuals' attitudes or behaviors may be influenced by not only empowerment at the individual level but empowerment climate at the group level. That is, empowerment climate may also exert positive signals to individuals, such as enhancing self-determination and intrinsic motivation (Chen et al., 2007a; Chen, Lam, & Zhong, 2007b; Spreitzer, 2007; Seibert, Wang, & Courtright, 2011). Seibert, Silver, and Randolph (2004) have suggested that an empowerment climate is a shared perception regarding the extent to which a group makes use of structures, policies, and practices to support employees' access to power. According to Seibert, Silver, and Randolph (2004), the more an organization provides potentially sensitive information on costs, productivity, quality, and financial performance to employees (*information sharing*), implements the organizational structures and practices that encourage employees' autonomous behaviors (*autonomy through boundaries*), and delegates decision-making authority to employees (*team responsibility and accountability*), the more empowerment climate emerges in groups. As such, empowerment climate means the extent to which a team as a whole has autonomy as well as competence to perform meaningful tasks that can impact important organizational outcomes (Zhou, Wang, & Chen, 2012).

Here, although individual's psychological empowerment and empowerment climate are positively related (Chen, Lam, & Zhong, 2007b; Zhou, Wang, & Chen, 2012), empowerment climate and psychological empowerment are conceptually distinct (Seibert, Silver, & Randolph 2004; Chen, Lam, & Zhong, 2007b; Spreitzer, 2007). According to Seibert, Silver, and Randolph (2004), first of all, while psychological empowerment is related to individuals' subjective experiences of empowerment, empowerment climate is relatively related to perception of whether the organization's system, policies, and practices encourage employees' empowerment. In addition, while psychological empowerment mainly focuses on individuals' internal psychological states such as meaning, competence, self-determination, and impact in the work roles (Spreitzer, 2007), empowerment climate reflects the meaning of organizational structures and practices related to information sharing, autonomy, and accountability.

Cross-level main effect of empowerment climate on job stress

Indeed, the climate of the group in which an employee is embedded critically affects his/her attitude and behavior. As with the mechanism of the effect of empowerment on attitudes or behaviors at the individual level (Holdsworth & Cartwright, 2003; Chen et al., 2007a; Chen, Lam, & Zhong, 2007b; Zhang & Bartol, 2010), empowerment climate will have a positive influence on employees' outcomes. For instance, employees working in teams that are more empowered will think that that they have more intrinsically meaningful work and, as a group, have a higher degree of discretion in deciding how they carry out their team tasks; they believe that they have the collective ability to accomplish works or roles, which have an impact or significant importance for their organization (Seibert, Wang, & Courtright, 2011). In this regard, we expect that, after controlling for the effect of distributive justice

https://doi.org/10.1017/jmo.2013.35 Published online by Cambridge University Press

at the individual level, the empowerment climate will decrease the employees' job stress, because work groups' practices regarding empowerment (e.g., participative decision making, empowering leadership) will provide a positive feeling toward work groups or energetic behaviors.

Hypothesis 3a: The empowerment climate will be negatively related to employees' job stress beyond the effect of distributive justice at the individual level.

Cross-level moderating effect of empowerment climate in the relationship between distributive justice and job stress

Empowerment climate will also moderate the relationship between distributive justice and job stress at the individual level. It is well acknowledged that individuals are embedded within the relationship with a group or organization, and thus they do not act alone. Some previous studies have examined the moderating role of empowerment climate at team level on individuals' consequences. For instance, Chen, Lam, and Zhong (2007b) found that the climate of empowerment within a team moderated the positive relationship between leader–member exchanges and followers' negative feedback-seeking behavior. Si and Wei (2012) found that the positive relationship between supervisors' transformational leadership and subordinates' creative performance was stronger when the team had a high level of empowerment climate. These previous studies suggest that, although justice perception influences stress at the individual level, this relationship may be affected by climates at the group level (Naumann & Bennett, 2000; Liao & Rupp, 2005; Mayer, Nishii, Schneider, & Goldstein, 2007). In this regard, we suggest that an empowerment climate at the group level affects the relationship between distributive justice and job stress at the individual level. Two possible rationales for explaining the moderating effect of empowerment climate are driven from theories on job stress.

First, job demand–resource model, as one of theories on job burnout, proposes that burnout is formed by two job-related characteristics – job demand and job resource (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001). Job demands are the aspects of the job that require effort; on the other hand job resources are characteristics of the job that assist in achieving work goals or lead to personal growth. Information, autonomy, and accountability, as dimensions of psychological empowerment, can serve as job resources to perform well. Thus, if employees who do not have appropriate information, autonomy, and accountability for their work will feel that they lack resources, and they will thus experience burnout (Maslach, Schaufeli, & Leiter, 2001; Holdsworth & Cartwright, 2003; Newton & Jimmieson, 2008). In contrast, an empowerment climate may serve the role of social support from supervisors or the organization (Chen, Lam, & Zhong, 2007b). The job demand–resource model emphasizes the important role of social support as a resource that can reduce the likelihood of burnout (Halbesleben & Buckley, 2004). Therefore, if employees perceive a lack of autonomy accountability and control over the job, they may experience frustration and stress. On the contrary, if the employees' shared cognition about empowerment is high, even though one perceives unfairness in terms of distribution, this may not easily relate to job stress. Indeed, empirical studies (e.g., Lee & Ashforth, 1996; Demerouti et al., 2001; Hung et al., 2012) found that employees who had a feeling of control over their job participated in work process, received feedback, and showed lower emotional exhaustion.

Second, the empowerment climate may reduce the job stress induced by distributive injustice through enhancing self-confidence. When employees are empowered, they will feel that they have the ability to determine work outcomes, feel competent to achieve their goals, and believe that they have an impact on the work environment (Spreitzer, 2007). Empowerment signals to employees that the organization trusts their judgment and competence (Erdogan & Bauer, 2009), which may convey to employees that they have high status within the organization, and thus may feel less stress. Likewise, at the group level, when employees in an organization collectively perceive that they are empowered

https://doi.org/10.1017/jmo.2013.35 Published online by Cambridge University Press

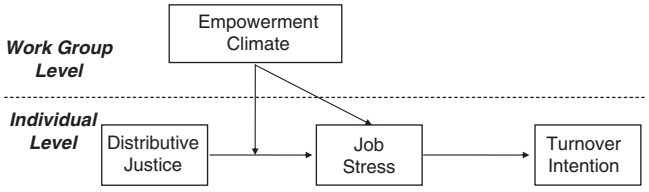

FIGURE 1. THE RESEARCH MODEL

concerning their work, they are likely to have positive emotions (e.g., happiness, joy). As a result, employees in groups with an empowerment climate will work with a higher level of interpersonal trust among team members, share information among coworkers, and receive sufficient support from managers. These positive and favorable environments within the groups will facilitate teamwork, trust in coworkers, and confidence in work, which will reduce the negative impact caused by stress related to unfair rewards. (Figure 1)

Taken together, we expect that the empowerment climate would influence the negative relationship between distributive justice and job stress at the individual level, such that the negative relationship would be stronger for groups with a higher level of empowerment climate than for groups with a lower level.

Hypothesis 3b: The empowerment climate will moderate the relationship between distributive justice and job stress, such that the negative relationship will be stronger for group with a high level of empowerment climate.

METHOD

Sample and procedures

The sample consisted of 5,834 employees from 115 work groups in South Korea. Human Resource Department managers in each work group served as the contact for our research. Using contact information obtained from the Human Resource managers, we sent the survey questionnaires with a cover letter explaining the purpose of the survey to respondents through an e-mail.

Ultimately, the final usable return of 4,432 surveys from 90 work groups yielded a response rate of 75.9% at the individual level and 78.2% at the work group level. For each group, the average number of respondents was 49 ranging from 25 to 95. Across work groups, the average age and organizational tenure of respondents were 34.9 years (SD = 5.2) and 8.5 years (SD = 6.9), respectively. A total of 78.2% of the respondents were male. For educational level, 86.8% held college education or above, and 13.2% had below college education. In terms of job title, 97.8% were front-line employees and 2.2% were managers. Respondents worked in one of four types of jobs; R&D (29.1%), manufacturing (19.9%), marketing and sales (30.3%), and administrative work (20.7%).

Measures

All the variables were measured by respondents to questions on a 5-point Likert-type scale ranging from 1 = 'strongly disagree' to 5 = 'strongly agree'. The specific measures are described below, along with the Cronbach's α coefficients for each measure.

Distributive justice

We assessed the distributive justice with two items adapted from the five-item measure of Niehoff and Moorman (1993), which was developed to assess the fairness of various work dimensions such as pay

https://doi.org/10.1017/jmo.2013.35 Published online by Cambridge University Press

level, work load, and job responsibility. Among these dimension, we assessed the distributive justice by focusing on the pay level. The items are: 'I think that my level of pay is fair' and 'Overall, the rewards I receive here are quite fair.' Internal consistency reliability was 0.74.

Job stress

Job stress was assessed with six items by adopting the validated 15-item measures developed by Parker and Decotiis (1983). A higher score means that employees feel a high level of stress in work in terms of time and anxiety. Sample items are 'There are lots of times when my job drives me right up the wall,' 'Working here leaves little time for other activities,' and 'I feel like I never have a day off.' Internal consistency reliability was 0.93.

Turnover intention

We used a single-item measure for assessing the intention to leave by referring the previous measures on turnover intention (e.g., Stahl, Chua, Caligiuri, Cerdin, & Taniguchi, 2009). The item is, 'I am willing to leave this organization soon.'

Empowerment climate

Empowerment climate was assessed with nine items adopted from the measure of Seibert, Silver, and Randolph (2004). Originally, Seibert, Silver, and Randolph (2004) developed the 30-item measure for empowerment climate that consists of three dimensions such as information, autonomy, and responsibility and accountability. Among these items, we adopted nine items for our research purpose. Sample items are: 'Our organization encourages their people to take risks by trying new things and taking risks themselves,' 'Our organization gives opportunities to perform a challenging role or task to develop and tap into my capabilities,' and 'People in our organization can confidently voice their opinions without having to worry about how their manager will respond.' Internal consistency reliability was 0.88.

Control variables

We controlled the age, gender, educational level, tenure, and job title, because these variables might influence the job stress or turnover intentions (e.g., Griffeth, Hom, & Gaertner, 2000).

Validity test

Confirmatory factor analyses were conducted to evaluate the convergent and discriminant validity of measures, using AMOS 7.0. We evaluated the goodness of each model by determining whether the values of comparative fit index (CFI) and Tucker–Lewis index (TLI) is >0.90, and the value of the root–mean squared error of approximation (RMSEA) is <0.08 (Lance & Vandenberg, 2002). The confirmatory factor analyses results showed that the four-factor model including distributive justice, job stress, empowerment climate, and turnover intention yielded a better goodness-of-fit index [$\chi^2(df) = 2{,}908.5(130)$, CFI = 0.940, TLI = 0.921, RMSEA = 0.069], with a significant change of χ^2 of 11,539.8 ($\Delta df = 5$, $p < .001$) than a single-factor model considering all four measures as a single factor [$\chi^2(df) = 11{,}630.6(135)$, CFI = 0.751, TLI = 0.685, RMSEA = 0.139].

Our data may have the possibility of common-method bias because all measures were gathered from the same source in the same questionnaire (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). As a result, it is critical for us to make our best effort in minimizing common method bias through statistical remedies. One is the Harman's one-factor test suggested by Podsakoff et al. (2003). The results of an unrotated principal component factor analysis including all items of measures showed that eight factors were extracted with an eigenvalue >1 and each item was loaded on its appropriate

https://doi.org/10.1017/jmo.2013.35 Published online by Cambridge University Press

factor, with primary loadings exceeding 0.40. Additionally, the first factor accounted for only 23.2% of the total variance, and hence no general factor appeared in the factor structure.

Aggregation

Following the procedure suggested by Chan (1998), the referent-shift model was used for empowerment climate to aggregate data at the individual level into work group level. To justify the aggregation of empowerment at the individual level to the climate at the work group level, we tested within-group consensus and between-group variance (James, Demaree, & Wolf, 1993; Chan, 1998). First, within-group agreement statistic (r_{wg}) for empowerment climate was calculated. The value of r_{wg} of an empowerment climate was 0.83 with range from 0.75 to 0.99. This r_{wg} value was above the acceptable r_{wg} value of 0.70 (James et al., 1994). Second, we calculated the values of the intraclass reliability index (ICC1) and the reliability of group mean index (ICC2) by following one-way analysis of variance (Bliese, 2000). ICC1 provides an estimate of the extent to which individual-level variability on a given measure is explained by higher-level units and the ICC2 provides an estimate of the reliability of group means. ICC1 and ICC2 of empowerment climate were 0.10 and 0.85 ($F = 5.70$, $p < .001$), respectively. These values exceeded the acceptable level and suggested that within-group agreement was sufficient (Castro, 2002). Based on these results, we concluded that the aggregation of empowerment at the individual level to empowerment climate at the work group level was justified.

Analytical strategy

We used hierarchical linear modeling (HLM) analyses to test all the hypotheses by using HLM 7 software, since the current model is the effect of distributive justice at the individual level and the cross-level effect of empowerment climate at the work group level (Bryk & Raudenbush, 1992). HLM is a suitable statistical technique for simultaneously estimating the effects of predictors on dependent variable outcome at different levels, while maintaining appropriate levels of analyses for these predictors (Hofmann, Griffin, & Gavin, 2000).

We followed four models using HLM analyses (Bryk & Raudenbush, 1992). Briefly describing our analytical strategy with HLM, first, we estimated the *null models* (with no predictors involved) for the dependent variables (turnover intention and job stress) – and found the variance in dependent variables by examining the significant Level 2 variance (τ_{00}). The significance of between-group variance (τ_{00}) is a necessary condition that must be satisfied before further analysis can be undertaken, and demonstrates that there is sufficient between-group variance in job stress.

In the second model, we performed *a random-coefficient regression model* (*Level 1 analysis*) to estimate the effects of an independent variable (distributive justice) on mediating (job stress) and a dependent variable (turnover intention) at the individual level. The significance of β_{ij} relates to Hypotheses 1 and 2. Additionally, we can estimate whether the relationship between an individual's distributive justice and job stress varied over work groups through the significance of between-group variance (τ_{66}), and whether the absolute amount of job stress varied in accordance with work units through the significance of between-group variance (τ_{00}). Assuming significant between-group variance in both slopes and intercept for individual's distributive justice predicting job stress, in the third model, *an intercept-as-outcomes model* (*Level 2 analysis*), in which intercept estimates derived from the Level 1 analysis were regressed on empowerment climate, was performed. The purpose of this model was to test whether empowerment climate could account for the between-group variance in pooled Level 1 intercept from the previous random-coefficient regression model. More specifically, this model tested whether the individual's job stress was affected by not only the individual's distributive justice but also empowerment climate. Accordingly, the third model tests Hypothesis 3a. Finally, the fourth model is *a slopes-as-outcomes model* (*Level 2 analyses*) in which slope estimates

https://doi.org/10.1017/jmo.2013.35 Published online by Cambridge University Press

derived from the Level 1 analysis were regressed on empowerment climate. This model tested for cross-level moderating effects that would reveal whether the relationship between distributive justice and job stress at the individual level varies depending on empowerment climate at the work group level. Thus, this final model tests the Hypothesis 3b. The following equations are our final model for testing cross-level effects of empowerment climate.

$$\begin{aligned}
\text{Level 1}: \text{Job stress}_{ij} &= \beta_{0j} + \beta_{1j}(\text{Age}) + \beta_{2j}(\text{Gender}) + \beta_{3j}(\text{Education}) \\
&\quad + \beta_{4j}(\text{Tenure}) + \beta_{5j}(\text{Title}) + \beta_{6j}(\text{Distributive justice}) + r_{ij} \\
\text{Level 2}: \beta_{0j} &= r_{00} + r_{01}(\text{Empowerment climate}) + U_{0j} \\
\text{Level 2}: \beta_{1j} &= r_{10} + U_{1j} \\
\text{Level 2}: \beta_{2j} &= r_{20} + U_{2j} \\
\text{Level 2}: \beta_{3j} &= r_{30} + U_{3j} \\
\text{Level 2}: \beta_{4j} &= r_{40} + U_{4j} \\
\text{Level 2}: \beta_{5j} &= r_{50} + U_{5j} \\
\text{Level 2}: \beta_{6j} &= r_{60} + r_{61}(\text{Empowerment climate}) + U_{6j}
\end{aligned}$$

Following Hofmann, Griffin, and Gavin (2000), we grand-mean-centered all Level 1 variables to facilitate interpretation except control variables. The results of HLM did not show the explained variance (R^2), thus we calculated R^2 for each model, according to the formula suggested by Hofmann, Griffin, and Gavin (2000)[1].

RESULTS

Table 1 shows the means, standard deviations, and intercorrelations. As Table 1 shows, correlations provide initial supports for the Hypotheses. For instance, distributive justice was negatively related to job stress ($r = -0.414$, $p < .001$), and job stress was positively related to turnover intention ($r = 493$, $p < .001$).

Table 2 presents the results of HLM analyses. First of all, we tested Hypotheses 1 and 2 through performing a random coefficient model, since these hypotheses are related to testing the main effect of distributive justice on turnover intention and the mediating effect of job stress at the individual level with no predictors at the work group level. Model 3 showed that distributive justice was negatively related to turnover intention ($\gamma_{60} = -0.509$, $p < .001$, $R^2_{\text{Level 1}} = 0.221$) with the increase of explained variance (ΔR^2 for Level 1) of 15.4%. Thus, Hypothesis 1, which expects that distributive justice would be negatively related to turnover intention, was supported.

Hypothesis 2 on the mediating effect of job stress was assessed by Baron and Kenney's (1986) three-step procedures. First, as shown in Model 3, distributive justice was negatively related to turnover intention. Second, Model 7 showed that distributive justice had a negative influence on job stress ($\gamma_{60} = -0.415$, $p < .001$, $R^2_{\text{Level 1}} = 0.179$). Finally, as seen in Model 4, when both distributive justice and job stress were regressed on turnover intention, while the coefficient of distributive justice ($\gamma_{60} = -0.400$, $p < .001$) was reduced compared to that of Model 3, the effect of job stress ($\gamma_{60} = 0.423$, $p < .001$) was significant with the increase of explained variance (ΔR^2 for Level 1) of 10.8%. Taken together, job stress had a partial mediating effect. Thus, Hypothesis 2 was supported.

[1] R^2 for an intercept-as-outcome model was calculated by residual variance of the intercepts [$R^2 = (\tau_{00\ \text{random coefficient model}} - \tau_{00\ \text{intercept-as-outcome model}})/\tau_{00\ \text{random coefficient model}}$] and R^2 for a slope-as-outcome model was calculated by residual variance of the slope [$R^2 = (\tau_{66\ \text{intercept-as-outcome model}} - \tau_{66\ \text{slope-as-outcome model}})/\tau_{66\ \text{intercept-as-outcome model}}$].

https://doi.org/10.1017/jmo.2013.35 Published online by Cambridge University Press

https://doi.org/10.1017/jmo.2013.35 Published online by Cambridge University Press

Table 1. Means, standard deviations, and correlations

Variables	*Mean*	*SD*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*
1. Gender	0.784	0.411								
2. Age	34.920	5.218	0.388***							
3. Education	0.868	0.339	0.150***	0.075***						
4. Tenure	8.521	6.949	−0.058***	0.172***	−0.055***					
5. Title	0.978	0.147	0.007	0.019	−0.017	0.015				
6. Distributive justice	3.163	0.847	−0.003	0.027	0.010	0.039*	−0.113***			
7. Job stress	2.797	0.906	0.019	−0.011	−0.020	−0.019	0.082***	−0.414***		
8. Turnover Intention	2.308	1.065	0.025	−0.014	0.010	−0.024	0.114***	−0.436***	0.493***	
9. Empowerment climate	3.545	0.248	−0.009	0.002	0.009	0.002	0.019	0.230***	−0.279***	−0.175***

Notes. $n = 4{,}432$ at the individual level, $n = 90$ at the work group level.
Gender (0 = female, 1 = male), education (0 = below college, 1 = above college), title (0 = manager, 1 = employee).
*$p < .05$, ***$p < .001$.

https://doi.org/10.1017/jmo.2013.35 Published online by Cambridge University Press

Table 2. The results of HLM analyses for testing hypotheses

		Turnover intention					*Job stress*			
		Model 1 Null model	*Model 2 Random model*	*Model 3 Random model*	*Model 4 Random model*	*Model 5 Null model*	*Model 6 Random model*	*Model 7 Random model*	*Model 8 Intercept model*	*Model 9 Slope Model*
Level 1										
Constant	r_{00}	2.298***	2.307***	2.314***	2.317***	2.798***	2.793***	2.798***	5.419***	5.245***
Control variables										
Age	r_{10}		−0.005	−0.002	−0.002		−0.005	−0.003	−0.003	−0.003
Gender	r_{20}		0.086	0.067	0.037		0.075*	0.060	0.058	0.057
Education	r_{30}		0.016	0.037	0.062		−0.076*	−0.067	−0.063	−0.061
Tenure	r_{40}		−0.002	0.000	0.000		−0.002	0.000	0.000	0.000
Title	r_{50}		−0.205***	−0.162***	−0.137***		−0.096***	−0.058***	0.060***	−0.060***
Independent variable										
Distributive justice	r_{60}			−0.509***	−0.331***			−0.415***	−0.400***	0.343
Mediating variable										
Job stress	r_{70}				0.423***					
Level 2										
Cross-level main effects										
Empowerment climate	r_{01}								−0.740***	−0.689***
Cross-level moderating effects										
Distributive justice × empowerment climate	r_{61}									−0.209**
σ^2		1.071	0.999	0.834	0.719	0.747	0.722	0.613	0.613	0.612
Between-group variance	t_{00}	0.060	0.058	0.025	0.018	0.071	0.071	0.046	0.016	0.016
χ^2 of within-group variance		328.450***	258.798***	148.452***	132.176**	526.151***	376.458***	282.406***	154.958***	154.309***
Between-group variance	t_{66}	–	–	0.010	0.014	–	–	0.008	0.008	0.006
χ^2 of between-group variance		–	–	130.135**	112.513*	–	–	128.411**	129.194**	119.236*
R^2 Level 1		0.947	0.067	0.221	0.329	0.914	0.033	0.179	0.025	0.025
R^2 Level 2		0.053	0.049	0.590	0.705	0.086	0.000	0.352	0.652	0.250

Notes. $n = 4{,}432$ at the individual level, $n = 90$ at the work group level.
*$p < .05$, **$p < .01$, ***$p < .001$.

Hypotheses 3a and 3b relate to the cross-level effects of an empowerment climate. First, as a precondition for testing HLM, *a null model* without any predictor was tested. Model 5 provided evidence of significant between-group variance in job stress ($\tau_{00} = 0.071$, $\chi^2 = 526.151$, $p < .001$), thus justifying further cross-level analysis. Moreover, the χ^2 test of Model 7 also indicated that there was significant between-group variance in the intercepts ($\tau_{00} = 0.046$, $\chi^2 = 282.406$, $p < .001$) and slope ($\tau_{66} = 0.008$, $\chi^2 = 128.411$, $p < .01$) for job stress, after controlling the effect of distributive justice at the individual level. Thus, we can go to the next analysis to test the cross-level main effect of empowerment climate on job stress.

Model 8 as *an intercept-as-outcomes model* showed that the empowerment climate was negatively related to job stress at the individual level ($\gamma_{01} = -0.740$, $p < .001$, $R^2_{\text{Level 2}} = 0.652$). Thus, Hypothesis 3a, which predicts that empowerment climate will have a negative influence on job stress beyond the effect of individual-level distributive justice, was supported.

Model 9 as *a slope-as-outcomes model* demonstrated that an empowerment climate ($\gamma_{01} = -0.209$, $p < .01$, $R^2_{\text{Level 2}} = 0.250$) had a significant cross-level moderating effect on the relationship between distributive justice and job stress at the individual level. Thus, Hypothesis 3b, which expects that the strength of the relationship between distributive justice and job stress will be influenced by an empowerment climate, was supported.

Figure 2 shows the plot for the cross-level moderating effect of an empowerment climate. As expected in our hypotheses, a simple slope analysis (Aiken & West, 1991) showed that the negative relationship between an individual's distributive justice and job stress was stronger in work groups with a high empowerment climate (*simple slope* = –0.462, $t = -14.92$, $p < .001$) than in work units with a low empowerment climate (*simple slope* = –0.296, $t = -7.95$, $p < .001$).

DISCUSSION

Distributive justice is an important concern for all employees and organizations. Equitable reward is one of the strongest motivators for employees to continuously perform well and to show favorable attitudes for the organization. In contrast, distributive inequity can bring undesirable consequences for employees.

Even though distributive justice may be significantly related to employees' job stress and turnover intention, it is surprising that this relationship has not been fully investigated empirically and theoretically. We expected that employees' perception of distributive justice would influence their job stress, and in turn affect turnover intention. In addition, although the relationship between distributive justice and job stress operates at the individual level, the strength of this relationship may be different in accordance with the group-level climate. In this respect, we tried to examine the empowerment climate as a group-level variable with a multi-level research design, and found that an empowerment climate at the work group level reduced employees' job stress and also affected the negative relationship between distributive justice and job stress at the individual level.

Theoretical and practical implications

The theoretical implications of our study are threefold. First, we empirically tested the possible relationship between distributive justice and job stress which had been suggested by some previous studies (e.g., Maslach, Schaufeli, & Leiter, 2001; Tepper, 2001; Halbesleben & Buckley, 2004; Judge & Colquitt, 2004). Additionally, most previous studies have *implicitly* emphasized the role of procedural and interaction justice in the job stress phenomenon, and thus the effect of distributive justice on job stress has been somewhat neglected. However, we found that distributive injustice can be a stressor, and job stress explained the relationship of distributive justice and turnover intention.

https://doi.org/10.1017/jmo.2013.35 Published online by Cambridge University Press

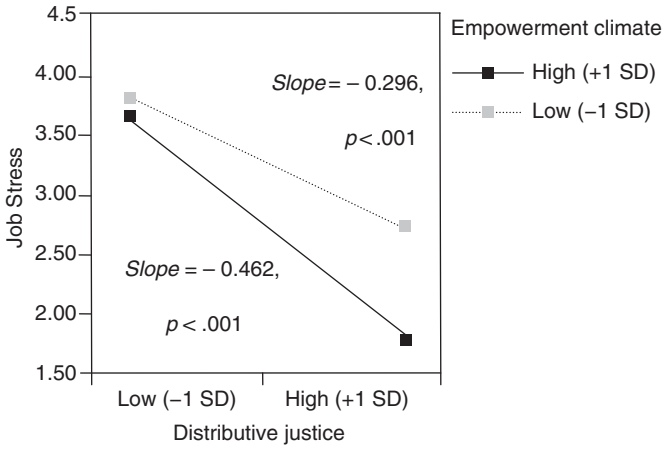

FIGURE 2. THE PLOTS FOR CROSS-MODERATING EFFECTS OF EMPOWERMENT CLIMATE ON THE RELATIONSHIP BETWEEN DISTRIBUTIVE JUSTICE AND JOB STRESS

Second, our study contributes to the literature of organizational justice and job stress, in that we tried to explore the *theoretical* explanatory mechanisms such as uncertainty management, social comparison, and job stress and/or burnout theories. In particular, we paid attention to the job resource–demand theory which argues that stress is a result of a mismatch of job demand and job resource (Hobfoll, 2001). With this theory, we posited that the reward or outcome employees received from their organization may be job resource and their effort or contribution may be job demand. Thus, when employees do not receive a reward commensurate with their input, they feel that they do not have an appropriate level of resources compared to the job demand, and thus feel job stress.

Third, we showed the cross-level main and interactional effect of empowerment climate on the relationship between distributive justice and job stress at the individual level. Consistent with prior studies, the employees' job stress was mainly influenced by their own perception of distributive justice; however, empowerment climate also influenced their job stress.

Additionally, our study suggests some practical implications. First, organizations must pay attention to the work group-level climate (Mayer et al., 2007; Li & Cropanzano, 2009). Managers need to understand that empowerment climate is critical to reduce the negative influence of distributive justice on job stress. As our results showed, empowerment can reduce job stress, and can mitigate the effects of distributive injustice on job stress through creating a positive group environment. Thus, it is important that organizations need to provide employees with the opportunity for them to be empowered, such as participation in decision making (Newton & Jimmieson, 2008). In addition, organizations should train managers on how to foster an empowerment climate in their work units.

Limitation and future research

We acknowledge some limitations. First, the possibility of common method bias and reverse causality must be considered when interpreting the results of relationships among variables. Our results may be over-inflated, given that all variables were obtained from a single source and measured by a self-reported questionnaire (Podsakoff et al., 2003). In addition, it is possible that job stress may be an antecedent causing the perception of distributive injustice. Therefore, we recommend that future research attempts to avoid the bias caused by a common method by acquiring data from multiple sources.

https://doi.org/10.1017/jmo.2013.35 Published online by Cambridge University Press

Second, this study may be limited in its potential to be generally applicable. Because we collected data from South Korean companies, one might question whether our findings can be applied to other nations with different cultures. Hence, future research, with ample data and with different cultures, should determine whether our results would be valid for other cultural contexts.

Third, a cautious interpretation is needed for understanding the results of this study, because we did not control the effects of procedural and interactional justice on job stress as well as turnover intention. Indeed, previous empirical studies, beside distributive justice, procedural, and interactional justice also are significantly related to job stress (Judge & Colquitt, 2004; Cole et al., 2010) and turnover intention (Colquitt et al., 2000; Hausknecht, Sturman, & Roberson, 2011). Moreover, according to Cohen-Charash and Spector (2001) and Mayer et al. (2007), although distributive, procedural, and interactional justices are different constructs, these three types of organizational justice are strongly related. In this respect, in future research, procedural and interactional justice should be controlled to precisely isolate the effect of distributive justice.

Finally, we did not fully consider individual characteristics. For instance, individuals' justice orientation (Liao & Rupp, 2005) and psychological contracts such as transactional contract (Rousseau, 1989) may affect the influence of distributive justice on employees' attitudes. Thus, it is necessary to further explore individuals' personality or dispositional traits that might affect the relationship between distributive justice and job stress.

CONCLUSION

This study attempted to explain the theoretical reasons why an employees' perception of distributive justice leads to turnover intention and how an empowerment climate at work groups influences. We found that job stress mediated the influence of distributive justice on turnover intention. Hence, organizations must fully understand that employees' stress can be caused by distributive injustice, and in turn increase turnover intention. Moreover, our study emphasizes the empowerment climate as a useful vehicle for diminishing the negative influence of distributive injustice on job stress. As our results show, when work groups have a high level of empowerment climate, the negative influence of employees' perception of distributive injustice on job stress was weak. In this regard, organizations have to pay more attention to encourage an empowerment climate in the work groups. Educating empowering leadership or job redesign to make employees feel empowered might serve to achieve an empowerment climate.

ACKNOWLEDGEMENTS

The authors would like to thank the editor and anonymous reviewers for constructive comments.

REFERENCES

Adams, J. S. (1965). Inequity in social exchange. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (pp. 267–299). New York, NY: Academic Press.

Aiken, L. S., & West, S. G. (1991). Multiple regression: Testing and interpreting interactions. Thousand Oaks, CA: Sage.

Aquino, K., Griffeth, R. W., Allen, D. G., & Hom, P. W. (1997). Integrating justice constructs into the turnover process: A test of a referent cognitions model. *Academy of Management Journal*, *40*(5), 1208–1227.

Aryee, S., Budhwar, P. S., & Chen, Z. X. (2002). Trust as a mediator of the relationship between organizational justice and work outcomes: Test of a social exchange model. *Journal of Organizational Behavior*, *23*(3), 267–286.

Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual strategic and statistical considerations. *Journal of Personality and Social Psychology*, *15*(6), 1173–1182.

Bliese, P. D. (2000). Within-group agreement, non-independence, and reliability: Implications for data aggregation and analysis. In K. J. Klein & S. W. J. Kozlowski (Eds.), *Multilevel theory, research, and methods in organizations* (pp. 349–381). San Francisco, CA: Jossey-Bass.

Brockner, J., & Wiesenfeld, B. M. (1996). An integrative framework for explaining reactions to decisions: Interactive effects of outcomes and procedures. *Psychological Bulletin*, *120*(2), 189–208.

Bryk, A., & Raudenbush, S. W. (1992). *Hierarchical linear models for social and behavioral research: Applications and data analysis methods*. Newbury Park, CA: Sage.

Castro, S. L. (2002). Data analytic methods for the analysis of multilevel questions: A comparison of intraclass correlation coefficients, rwg(j), hierarchical linear modeling, within- and between-analysis, and random group resampling. *Leadership Quarterly*, *13*(1), 69–93.

Chan, D. (1998). Functional relations among constructs in the same content domain at different levels of analysis: A typology of composition models. *Journal of Applied Psychology*, *83*(2), 234–246.

Chen, G., Kirkman, B. L., Kanfer, R., & Allen, D. (2007a). Multilevel study of leadership, empowerment, and performance in teams. *Journal of Applied Psychology*, *92*(2), 231–346.

Chen, Z., Lam, W., & Zhong, J. A. (2007b). Leader-member exchange and member performance: A new look at individual-level negative feedback-seeking behavior and team-level empowerment climate. *Journal of Applied Psychology*, *92*(1), 202–212.

Cohen–Charash, Y., & Spector, P. E. (2001). The role of justice in organizations: A meta-analysis. *Organizational Behavior and Human Decision Processes*, *86*(2), 278–321.

Cole, M. S., Bernerth, J. B., Walter, F., & Holt, D. T. (2010). Organizational justice and individuals' withdrawal: Unlocking the influence of emotional exhaustion. *Journal of Management Studies*, *47*(3), 367–390.

Colquitt, J., Conlon, E., Wesson, M., Porter, C., & Ng, K. (2001). Justice at the millennium: A meta–analytic review of 25 years of organizational justice research. *Journal of Applied Psychology*, *86*(3), 425–445.

Conger, J. A., & Kanungo, R. N. (1988). The empowerment process: Integrating theory and practice. *Academy of Management Review*, *13*(3), 471–482.

Cooper, C. L., Cooper, R. D., & Eaker, L. (1988). *Living with stress*. London: Penguin.

Cropanzano, R., Byrne, Z. S., Bobocel, D. R., & Rupp, D. E. (2001). Moral virtues, fairness heuristics, social entities, and other denizens of organizational justice. *Journal of Vocational Behavior*, *58*(2), 164–209.

De Boer, E. M., Bakker, A. B., Syroit, J. E., & Schaufeli, W. B. (2002). Unfairness at work as a predictor of absenteeism. *Journal of Organizational Behavior*, *23*(2), 181–197.

Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. New York, NY: Plenum Press.

Demerouti, E., Bakker, A. B., Nachreiner, F., & Schaufeli, W. B. (2001). The job demands-resources model of burnout. *Journal of Applied Psychology*, *86*(3), 499–512.

Elovainio, M., van den Bos, K., Linna, A., Kivimaki, M., Ala-Mursula, L., Pentti, J., & Vahtera, J. (2005). Combined effects of uncertainty and organizational justice on employee health: Testing the uncertainty management model of fairness judgments among Finnish public sector employees. *Social Science & Medicine*, *61*(12), 2501–2512.

Erdogan, B., & Bauer, T. N. (2009). Perceived overqualification and its outcomes: The moderating role of empowerment. *Journal of Applied Psychology*, *94*(2), 557–565.

Festinger, L. (1954). A theory of social comparison processes. *Human Relations*, *7*, 117–140.

Griffeth, R. W., Hom, P. W., & Gaertner, S. (2000). A meta-analysis of antecedents and correlates of employee turnover: Update, moderator tests, and research implications for the next millennium. *Journal of Management*, *26*(3), 463–488.

Halbesleben, J. R. B., & Buckley, M. R. (2004). Burnout in organizational life. *Journal of Management*, *30*(6), 859–879.

Hausknecht, J. P., Sturman, M. C., & Roberson, Q. M. (2011). Justice as a dynamic construct: Effects of individual trajectories on distal work outcomes. *Journal of Applied Psychology*, *96*(4), 872–880.

Hechanova, M. R. M., Amampay, R. B. A., & Franco, E. P. (2006). Psychological empowerment, job satisfaction and performance among Filipino service workers. *Asian Journal of Social Psychology*, *9*(1), 72–78.

Hobfoll, S. E. (2001). The influence of culture, community, and the nested self in the stress process: Advancing conservation of resources theory. *Applied Psychology: An International Review*, *50*(3), 337–370.

https://doi.org/10.1017/jmo.2013.35 Published online by Cambridge University Press

Hofmann, D. A., Griffin, M. A., & Gavin, M. B. (2000). The application of hierarchical linear modeling to management research. In K. J. Klein & S. W. J. Kozlowski (Eds.), *Multilevel theory, research, and methods in organizations: Foundations, extensions, and new directions* (pp. 467–511). Jossey-Bass.

Holdsworth, L., & Cartwright, S. (2003). Empowerment, stress and satisfaction: An exploratory study of a call centre. *Leadership & Organization Development Journal*, *24*(3), 131–140.

Hung, J.-Y., Fisher, R., Gapp, R., & Carter, G. (2012). Work-related stress impacts on the commitment of urban transit drivers. *Journal of Management & Organization*, *18*(2), 220–230.

James, L. R., Demaree, R. J., & Wolf, G. (1993). r_{wg}: An assessment of within-group interrater agreement. *Journal of Applied Psychology*, *78*(2), 306–309.

Janssen, O. (2004). How fairness perceptions make innovative behavior more or less stressful. *Journal of Organizational Behavior*, *25*(2), 201–216.

Judge, T. A., & Colquitt, J. A. (2004). Organizational justice and stress: The mediating role of work-family conflict. *Journal of Applied Psychology*, *89*(3), 395–404.

Karriker, J. H., & Williams, M. L. (2009). Organizational justice and organizational citizenship behavior: A mediated multifoci model. *Journal of Management*, *35*(1), 112–135.

Lance, C. E., & Vandenberg, R. J. (2002). Confirmatory factor analysis. In F. Drasgow & N. Schmitt (Eds.), *Measuring and analyzing behavior in organizations* (pp. 221–254). San Francisco, CA: Jossey-Bass.

Lavelle, J. J., Rupp, D. E., & Brockner, J. (2007). Taking a multifoci approach to the study of justice, social exchange, and citizenship behavior: The target similarity model? *Journal of Management*, *33*(6), 841–867.

Lee, R. T., & Ashforth, B. E. (1996). A meta-analytic examination of the correlates of the three dimensions of job burnout. *Journal of Applied Psychology*, *81*(2), 123–133.

LePine, J. A., LePine, M. A., & Jackson, C. L. (2004). Challenge and hindrance stress: Relationship with exhaustion, motivation to learn, and learning performance. *Journal of Applied Psychology*, *89*(5), 883–891.

Li, A., & Cropanzano, R. (2009). Fairness at the group level: Justice climate and intraunit justice climate. *Journal of Management*, *35*(3), 564–599.

Liao, H., & Rupp, D. E. (2005). The impact of justice climate and justice orientation on work outcomes: A cross-level multifoci framework. *Journal of Applied Psychology*, *90*(2), 242–256.

Liden, R. C., & Tewksbury, T. W. (1995). Empowerment and work teams. In G. R. Ferris, S. D. Rosen & D. T. Barnum (Eds.), *Handbook of human resources management* (pp. 386–403). Oxford, England: Blackwell.

Liden, R. C., Wayne, S. J., & Sparrowe, R. T. (2000). An examination of the mediating role of psychological empowerment on the relations between the job, interpersonal relationships, and work outcomes. *Journal of Applied Psychology*, *85*(3), 407–416.

Lind, E. A., & van den Bos, K. (2002). When fairness works: Toward a general theory of uncertainty management. In B. M. Staw & R. M. Kramer (Eds.), *Research in organizational behavior* (pp. 181–222). Boston, MA: JAI Press.

Martin, J. (1981). Relative deprivation: A theory of distributive justice for an era of shrinking resources. In L. L. Cummings & B. M. Staw (Eds.), *Research in organizational behavior* (pp. 53–108). Greenwich, CT: JAI Press.

Maslach, C., Schaufeli, W. B., & Leiter, M. P. (2001). Job burnout. *Annual Review of Psychology*, *52*, 397–422.

Masterson, S. S., Lewis-McClear, K., Goldman, B. M., & Taylor, S. M. (2000). Integrating justice and social exchange: The differing effects of fair procedures and treatment on work relationships. *Academy of Management Journal*, *43*(4), 738–748.

Mayer, D., Nishii, L., Schneider, B., & Goldstein, H. (2007). The precursors and products of justice climates: Group leader antecedents and employee attitudinal consequences. *Personnel Psychology*, *60*(4), 929–963.

Moliner, C., Martinez-Tur, V., Peiro, J. M., Ramos, J., & Cropanzano, R. (2005). Relationships between organizational justice and burnout at the work-unit level. *International Journal of Stress Management*, *12*(2), 99–116.

Moye, M. J., & Henkin, A. B. (2006). Exploring associations between employee empowerment and interpersonal trust in managers. *Journal of Management Development*, *25*(2), 101–117.

Naumann, S. E., & Bennett, N. (2000). A case for procedural justice climate: Development and test of a multilevel model. *Academy of Management Journal*, *43*(5), 881–889.

Newton, C., & Jimmieson, N. L. (2008). Role stressors, participative control, and subjective fit with organizational values: Main and moderating effects on employee outcomes. *Journal of Management & Organization*, *14*(1), 20–39.

https://doi.org/10.1017/jmo.2013.35 Published online by Cambridge University Press

Niehoff, B. P., & Moorman, R. H. (1993). Justice as a mediator of the relationship between methods of monitoring and organizational citizenship behavior. *Academy of Management Journal*, *36*(3), 527–556.

Parker, D. F., & DeCotiis, T. A. (1983). Organizational determinants of job stress. *Organizational Behavior and Human Performance*, *32*(2), 160–177.

Podsakoff, P. M., MacKenzie, S. B., Lee, J., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, *88*(5), 879–903.

Rousseau, D. M. (1989). Psychological and implied contracts in organizations. *Employee Responsibilities and Rights Journal*, *2*(2), 121–139.

Schaufeli, W. B. (2006). The balance of give and take: Toward a social exchange model of burnout. *Revue Internationale de Psychologie Sociale*, *19*(1), 87–131.

Seibert, S. E., Silver, S. R., & Randolph, W. A. (2004). Taking empowerment to the next level: A multiple-level model of empowerment performance, and satisfaction. *Academy of Management Journal*, *47*(3), 332–349.

Seibert, S. E., Wang, G., & Courtright, S. H. (2011). Antecedents and consequences of psychological and team empowerment in organizations: A meta-analytic review. *Journal of Applied Psychology*, *96*(5), 981–1003.

Si, S., & Wei, F. (2012). Transformational and transactional leaderships, empowerment climate, and innovative performance: A multilevel analysis in the Chinese context. *European Journal of Work and Organizational Psychology*, *21*(2), 299–320.

Spreitzer, G. M. (1995). Psychological empowerment in the workplace: Dimensions, measurement, and validation. *Academy of Management Journal*, *38*(5), 1442–1465.

Spreitzer, G. (2007). Taking stock: A review of more than twenty years of research on empowerment at work. In J. Barling & C. L. Cooper (Eds.), *Handbook of organizational behavior* (pp. 54–72). Thousand Oaks, CA: Sage.

Spreitzer, G., Kizilos, M. A., & Nason, S. W. (1997). A dimensional analysis of the relationship between psychological empowerment and effectiveness, satisfaction, and strain. *Journal of Management*, *23*(5), 679–704.

Stahl, G., Chua, C., Caligiuri, P., Cerdin, J., & Taniguchi, M. (2009). Predictors of turnover intentions in learning-driven and demand-driven international assignments: The role of repatriation concerns, satisfaction with company support, and perceived career advancement opportunities. *Human Resource Management*, *48*(1), 89–109.

Tepper, B. J. (2000). Consequences of abusive supervision. *Academy of Management Journal*, *43*(2), 176–190.

Tepper, B. J. (2001). Health consequences of organizational injustice: Tests of main and interactive effects. *Organizational Behavior and Human Decision Processes*, *86*(2), 197–215.

van den Bos, K., & Lind, E. A. (2002). Uncertainty management by means of fairness judgments. In M. P. Zanna (Ed.), *Advances in experimental social psychology* (pp. 1–60). San Diego, CA: Academic Press.

van Dierendonck, D., Schaufeli, W. B., & Bunnk, B. P. (2001). Burnout and inequity among human service professionals: A longitudinal study. *Journal of Occupational Health Psychology*, *6*(1), 43–52.

Walster, E., Berscheid, E., & Walster, G. W. (1973). New directions in equity research. *Journal of Personality and Social Psychology*, *25*(2), 151–176.

Zhang, Z., & Bartol, K. M. (2010). Linking empowering leadership and employee creativity: The influence of psychological empowerment, intrinsic motivation, and creative process engagement. *Academy of Management Journal*, *53*(1), 107–128.

Zhou, L., Wang, M., & Chen, G. (2012). Supervisors' upward exchange relationships and subordinate outcomes: Testing the multilevel mediation role of empowerment. *Journal of Applied Psychology*, *97*(3), 668–680.

https://doi.org/10.1017/jmo.2013.35 Published online by Cambridge University Press