“Job stress and turnover intention revisited: evidence from Korean firms”

AUTHORS
Ji-Young Ahn [https://orcid.org/0000-0003-1601-299X]
Wang Chaoyu [https://orcid.org/0000-0002-5496-1793]

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Abstract
This study revisits the relationship between job stress and turnover intention for employees using a sample of employees in public companies of Korea. The authors investigate both the effect of job stress on turnover and the process by which job stress affects employee turnover. In particular, they prove that job satisfaction mediates the relationship between stress and turnover intention of the employees. Furthermore, the authors explore the job stress-turnover relationship by extending a review of the organizational justice perspective and posit whether an employee perceived organizational justice could mitigate the presumed adverse effects of job stress on turnover intention. They suggest empirical evidence that there is a significant positive relationship between job stress and turnover intention, and that job satisfaction partially mediates this relationship. However, the authors found no strong evidence of moderating roles of perceived organizational justice. Based on the job demands-resources (JDR) model, the relationship between job stress and turnover intention is evidenced. Besides, the study implies that the incidence of perceived organizational justice fails to mitigate the effect of these value-decreasing job stressors on employee turnover.

INTRODUCTION
Job stress is an increasingly common feature of contemporary business and has become a common problem for human resource managers in organizations across the globe (Avey, Luthans, & Jensen, 2009). Due to the significant impact of stress at work on economic and health loss, research has been paid much attention in recent times (De Jonge, Bosma, Peter, & Siegrist, 2000; Avey, Luthans, & Jensen, 2009). Job stress is defined as a situation in which the work environment may cause the individual to experience poor psychological or physical health, or to cause risk factors making poor health more likely as a result of internalizing a poor reaction to stressors commonly experienced by employees in the workplace (Beehr, Johnson, & Nieva, 1995; Marek, Schaufeli, & Maslach, 2017). A basic premise in the literature is that stressors in the work environment including role stress, lack of social support, lack of control, and interaction of such conditions can be detrimental to individual’s health and performance and thereby organizational outcomes (Ning, Zhong, Libo, & Qiu, 2009; Marek, Schaufeli, & Maslach, 2017).

Among these costs of work stress, employee turnover is a major negative outcome of work stress and has been a critical issue for management in recent years (Chen, Lin, & Lien, 2010). Turnover intention is defined as conscious willfulness to quit the organization and seek other alternatives in other organization (Tett & Meyer, 1993). It is ex-
pected that job stress affects employee job satisfaction, which can, in turn, lead to low performance and intention to quit the job (Applebaum, Fowler, Fiedler, Osinubi, & Robson, 2010).

However, the relationship between job stress and employee turnover has been considered mixed at best in the literature. Evidence shows the positive relationship between job stress caused by role ambiguity and turnover (e.g., Chen, Lin, & Lien, 2010; Applebaum, Fowler, Fiedler, Osinubi, & Robson, 2010). On the other hand, studies have indicated no significant stress-turnover relationship, particularly when samples from different cultural contexts are used. This empirical inconsistency in findings of the relationship between job stress and turnover intention may show that individuals or firms differ extensively in their ability to deal with the negative impact of job stress. The prevailing discipline notes another possibility of such mixed results, which is that there is an unexplored mechanism through which job stress affects employee turnover. That is, an important question arises as to how such a relationship can occur and how negative effects of job stress on turnover intention can be mitigated. This calls for a study that is prepared to examine the potential mediating and/or moderating factors in understanding such a relationship between the employee and the factors inherent in the workplace, which would lead to or influence turnover indication. Thus, the aim of the study is to revisit the relationship between job stress and the multifaceted turnover process and provide a more comprehensive model of job stress and turnover relationship.

In this vein, we explore the possibility of whether perceived organizational justice can mitigate the negative effect of job stress on turnover intention among employees in manufacturing firms in Korea. The manufacturing industry in Korea has played an important role in the Korean economy and has created many employment opportunities, especially for non-managerial jobs (Kim & Bae, 2018). Despite its favorable conditions associated with the manufacturing industry, the industry faces a high level of turnover and challenges for reducing turnover (Ministry of Labor and Employment, 2017). Building on the job demands-resources (JDR) perspective, we examine whether perceived organizational justice is a significant factor related to resources in an organization in mitigating the negative impact of job stress on employee outcomes such as turnover intention (Monnot & Beehr, 2014; Topcic, Baum, & Kabst, 2016; Barbier, Demerouti, & Hansez, 2018). Moreover, little research addressed job stress from the organizational justice perspective. Building on Zohar’s empirical research (1995), we adopted the concept of role injustice by linking organizational justice (or injustice) with job stress. Specifically, we extend the application of perceived organizational justice in this job stress-turnover intention relationship to see whether perceived organizational justice moderates this relationship from the employee’s perspective.
Factors such as the excessive demands made from the management as demanded of the individual employee, or the poor ability of the employee worker to handle a particular situation as presented at the workplace (French, Ekstrom, & Price, 1963; Hobfoll, 1989). Put differently, job stress is the result of a dynamic person-environment interaction that is ongoing and varied in the workplace as a matter of course, as the organization works to manage the reaching of its goals with the help of the employees employed at the organization.

Studies on job stress-turnover intention relationship are mixed at best, and often do not cover all the bases regarding to employee perception of stressors in the workplace. Some researchers found that there is a significant relationship between stressors caused by role ambiguity, role overload, role conflict and turnover intention (Bedeian & Armenakis, 1981; Senatra, 1980), while some researchers have found that there is no significant relationship between role conflict, role ambiguity, and turnover intention, respectively, for employees in the workplace (Hamner & Tosi, 1974). This is partly because stress might be dependent on the individual's perception of the stressors, which typically involves substantial degrees of individual subjectivity, such as when an individual employee wonders regarding a stressful work-related situation: “What does this situation mean for me?” or “How does this result affect me on the job?”

The prevailing discipline notes another possibility of such mixed results, indicating there is an unexplored mechanism through which job stress affects employee turnover. Particularly, we examine the possibility that job satisfaction mediates such a relationship with an employee at an organization. Prior studies imply that separate dimensions of job stress will influence employee satisfaction in a different manner (Lambert, Qureshi, Frank, Klahm, & Smith, 2018). Specifically, not all job stressors are significantly related to job satisfaction and/or dissatisfaction of the employee in the workplace (Cavanaugh, Boswell, Roehling, & Boudreau, 2000; Gilboa, Shirom, Fried, & Cooper, 2008; Bettencourt & Brown, 2003; Eatough, Chang, Miloslavic, & Johnson, 2011). For instance, stressors can be divided into challenge-related and hindrance-related stressors (Cavanaugh, Boswell, Roehling, & Boudreau, 2000). On the one hand, challenge-related stressors such as work overload and time pressure stressors can be perceived as an opportunity for an individual to gain work-related development, which in turn can directly lead to job satisfaction. On the other hand, hindrance-related stressors such as role conflict and role ambiguity might be viewed as a blocking factor to building personal growth, leading to job dissatisfaction (Cavanaugh, Boswell, Roehling, & Boudreau, 2000; Gilboa, Shirom, Fried, & Cooper, 2008; Bettencourt & Brown, 2003; Eatough, Chang, Miloslavic, & Johnson, 2011). Besides, there is a well-established negative relationship between job satisfaction and turnover at an organization (Griffeth, Hom, & Gaertner, 2000; Duraisingam, Pidd, & Roche, 2009). Combining these two conditions, we argue that job stress directly affects job satisfaction, which could, in turn, lead to turnover intention, implying the mediating relationship between job stress and turnover intention. This leads to the following hypotheses in our empirical study:

H1: Job stress is positively associated with turnover intention.

H2: Job satisfaction mediates the relationship between job stress and turnover intention.

1.2. Job stress, perceived organizational justice, and turnover intention

We further explore the possibility that individual differences may moderate the relationship between job stress and its outcomes. Specifically, we examine the role of perceived organizational justice in examining job stress-turnover relationships with special emphasis on how perceived organizational justice may mitigate the presumed adverse effects of job stress. There has been paid little attention to the concept of organizational justice in the job stress literature. Organizational justice is defined as an individual’s perception of the fairness in the overall treatment received from an organization and their behavioral reactions to such perceptions as employees at the organization (Fernandes & Awamleh, 2006). The limited research that addressed job stress from the organizational justice perspective tends to view injustice as a stressor for the employee experiencing these feelings while working in the workplace environment. Zohar (1995) raised a new concept entitled “role injus-
“perceived organizational injustice can exert an interactive effect on the job stress for the employee in this position. Prior studies also suggest that the perceived unfairness that an employee experience on the job influences employee well-being, such as job satisfaction, organizational commitment, and mood states (Shepard & Cooper, 1986). The perception of fairness is considered as a significant factor adding to a favorable work environment that positively influences work attitudes and behaviors of employees in the workplace (Hart & Cooper, 2001; Vermunt & Steensma, 2001).

We extend the perceived organizational justice in examining job stress-turnover relationship as to how perceived organizational justice may mitigate the presumed negative effects of job stress on turnover intention. Specifically, we adopted the job demands-resources (JDR) model to examine the influence of job stress on employee turnover at an organization (Bakker & Demerouti, 2007; Topicc, Baum, & Kabst, 2016). Indeed, the employee’s actual experiences or perception of having experienced an organizational justice (or not) are significant resources in organizations (Monnot & Beehr, 2014). From the JDR model, it argues that enough mobilization of resources, such as supplies, support, and worker cooperation decreases job stress for given job demand. Furthermore, perceived organizational justice can dynamically affect relationships between job demands, job control, and job resources.

Scholars have suggested that organizational support as resources assisting employees experiencing job-related stressors could have an impact on the relationship between job stress and employee outcomes (Monnot & Beehr, 2014; Topicc, Baum, & Kabst, 2016). Studies have also implied that positive perception of social support or fair treatment not only decreases job stress itself, but also regulates its cause and effect (Etzion, 1984; Viswesvaran, Sanchez, & Fisher, 1999). When employees perceive unfairness in the treatment that is received from organizations such as in the form of perceived disparities regarding compensation, promotion, and recognition, such perception of organizational injustice will create tension within themselves, motivating them to resolve the tension (Adams, 1965; Cropanzano & Mitchell, 2005). Likewise, we posit that employees who perceive fair treatment from organizations would have less negative perception of job stress and would be less likely to leave the situation caused by any perception of job stress. Therefore, we posit that the perceived organizational justice attenuates the negative aspect of job stress, which in turn leads to weakening the effect of job stress on turnover. This leads to the following hypothesis:

\[ H3: \text{Perceived organizational justice will moderate the relationship between job stress and turnover intention, such that the positive relationship between the employee experiences of job stress and turnover intention will be weakened in a high level of perceived organizational justice.} \]

2. METHODS

2.1. Sample

The sample was constructed from the Human Capital Corporate Panel (HCCP), which is a government-sponsored national employer survey in Korea. The HCCP consists primarily of an employee survey (Workers Survey) and a corporate-wide survey (Enterprise Survey). In this study, the unit
of analysis of the study is the individual as an employee employed in a workplace environment organization, and we used a ‘workers survey’ that covers approximately 14,000 employees across 450 manufacturing public traded companies in Korea. Included are the data on human resource practice as well as employee attitudes and behaviors as recorded in the year 2015.

2.2. Measures

**Job stress** We used Keller’s (1984) job stress scale to assess the scale of the employee’s stress: “I often feel helpless or tired due to my current work” and “I feel a lot of tension about my current work,” and “There is a lot of strain from working in my job.” Participants indicated the degree with which they agree with this situation using a 5-point scale ranging from 1 (not at all) to 5 (absolutely). The higher score denoted that the employee experienced a higher level of job stress. It is noted that Cronbach’s alpha was .613 as utilized and referenced in this study.

**Job satisfaction** We used a single-item global measure of job satisfaction – “How satisfied are you with your current job overall” (Highhouse & Becker, 1993). By using a 5-point scale from 1 to 5, meaning “not at all” and “absolutely,” respectively, the study participants indicated the degree to which employees feel satisfied with their current job. A higher score indicates greater job satisfaction as experienced by the employee.

**Perceived organizational justice** was measured by a three-item scale based on Paterson, Green, and Cary (2002) which states: “Our company informs the employees about the situation of the company,” “Our company is fair in the performance evaluation and reward determination” to capture the degree of distributional justice which may be experienced by the employee in the workplace. The Cronbach’s alpha was noted at .640 in the study.

**Turnover intention** was measured by asking survey respondents: “I will consider moving to another company that offers a little bit good condition” (Tett & Meyer, 1993).

**Control Variables** We controlled for five demographic variables to prevent a potential compounding of study effects as related to age, gender, tenure, college graduate, and full-time status. For the variable related to age, it is noted that younger people may have a higher turnover intention compared with older people in the workplace. Employee tenure is measured with years of staying with a firm since it is noted that the longer the employees stay in the organization, the lower turnover intention they are likely to have, and a higher intention to possibly retire one day at the firm may come into play. Besides, an employee’s full-time status may influence turnover intention, such that full-time employees are less likely to quit the organization or risk losing tenure, benefits, etc. We also included the marital status in this review to determine if marital status affected the turnover intention.

3. RESULTS

The descriptive statistics of each variable are presented in Table 1. Job stress is noted as the independent variable and is positively correlated with the dependent variable of turnover intention. The mean of turnover intention is 2.79 out of 5. It is noted that perceived organizational justice has a significant negative correlation with turnover intention and is also negatively correlated with job stress.

Table 2 shows the results of hierarchical multiple regression analyses of turnover intention. In all models, the highest variation inflation factor (VIF) of the variables was 4.57, which is noted as having been much lower than the cut-off point of 10, indicating no multicollinearity problem in our dataset (Aiken & West, 1991). We tested a mediation model using Baron and Kenny’s (1986) model to test the mediating effect of job satisfaction between job stress and turnover intention. Model 1 in Table 2 included only the use of the control variables. It shows that older, married, or male workers are negatively related to a turnover intention, respectively.

As noted in Model 2 in Table 2, job stress has a positive relationship with turnover intention ($\beta = 0.311, p < 0.001$), and Model 2 has significantly more explanatory power than was noted in the case of Model 1. We note that these findings support Hypothesis 1. We use Model 3 to test the mediation hypothesis, and the regression coefficient of
job satisfaction is negative ($\beta = -0.188, p < 0.001$), as in the case for Model 4, which supports that job satisfaction is negatively related to turnover intention. For Hypothesis 3, we tested the mediating effect of job satisfaction between the association of the job stress-turnover intention relationship. In Model 4 in Table 2 when job satisfaction is included in the model, the coefficient of a regression for job stress is significantly decreased ($\beta = 0.295, p < 0.001$), compared to $\beta = 0.311 (p < 0.001)$ in Model 2. The results indicate that job satisfaction partially mediates the relationship between the incidence of job stress and turnover intention, which supports Hypothesis 2.

### Table 2. Results of a regression analysis of turnover intention (mediating model)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>-1.46***</td>
<td>-1.31***</td>
<td>-1.42***</td>
<td>-1.29***</td>
</tr>
<tr>
<td>Marital status</td>
<td>-0.058**</td>
<td>-0.064***</td>
<td>-0.055***</td>
<td>-0.061***</td>
</tr>
<tr>
<td>College graduate</td>
<td>0.01</td>
<td>0.037***</td>
<td>0.03</td>
<td></td>
</tr>
<tr>
<td>Full-time</td>
<td>-0.01</td>
<td>-0.011</td>
<td>-0.012</td>
<td>-0.012</td>
</tr>
<tr>
<td>Tenure</td>
<td>0.003</td>
<td>0.002</td>
<td>0.005</td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>-0.04**</td>
<td>-0.032**</td>
<td>-0.034**</td>
<td>-0.028**</td>
</tr>
<tr>
<td>Job stress</td>
<td>-0.31***</td>
<td></td>
<td>-0.295***</td>
<td></td>
</tr>
<tr>
<td>Job satisfaction</td>
<td>-</td>
<td>-</td>
<td>-1.88***</td>
<td>-1.58***</td>
</tr>
<tr>
<td>Adjusted $R^2$</td>
<td>0.037***</td>
<td>0.134***</td>
<td>0.072***</td>
<td>0.158***</td>
</tr>
<tr>
<td>$\Delta R^2$</td>
<td>0.097***</td>
<td>0.035**</td>
<td>0.024***</td>
<td></td>
</tr>
</tbody>
</table>

Note: a. $n = 10,038$. Values in the table are standardized regression coefficients, *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$.

Lastly, we tested the moderating effect of perceived organizational justice in the relationship between job stress and turnover intention. Table 3 presents the results of regression analyses on turnover intention. The regression coefficient of an employee’s perceived organizational justice is negative ($\beta = -0.394, p < 0.001$), implying that a perceived organizational justice may reduce the employee’s turnover intention. However, the interaction term of a cross-product of job stress and a perceived organizational justice is positive ($\beta = 0.082, p > 0.05$), but not statistically significant. In this context, Hypothesis 3 is not supported. We do not have enough evidence supporting the idea that an employee perceived organizational justice would moderate the positive relationship between the employee’s experienced job stress and turnover intention, such that the effect of the job stress on turnover is mitigated in the case of a high level of perceived organizational justice.

### Table 3. Results of a regression analysis of turnover intention (moderating model)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Model 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>-1.41***</td>
</tr>
<tr>
<td>Marital status</td>
<td>-0.069***</td>
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<tr>
<td>College graduate</td>
<td>0.045***</td>
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<tr>
<td>Full-time</td>
<td>-0.012</td>
</tr>
<tr>
<td>Tenure</td>
<td>-0.002</td>
</tr>
<tr>
<td>Gender</td>
<td>-0.009</td>
</tr>
<tr>
<td>Job stress</td>
<td>0.076</td>
</tr>
<tr>
<td>Perceived organizational justice</td>
<td>-0.394**</td>
</tr>
<tr>
<td>Job stress x perceived organizational justice</td>
<td>0.082</td>
</tr>
<tr>
<td>Adjusted $R^2$</td>
<td>0.194</td>
</tr>
</tbody>
</table>

Note: a. $n = 10,038$. Values in the table are standardized regression coefficients, *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$.
4. DISCUSSION

The study aimed to revisit the relationship between job stress and turnover intention of employees using a sample of employees based in Korean organizations. We also attempted to provide a more comprehensive model of the job stress-turnover process by investigating the potential mediating and moderating factors. Furthermore, we explore the job stress-turnover relationship by extending a review of the organizational justice perspective of the employees, as to how an employee perceived organizational justice could mitigate the presumed adverse effects of job stress on turnover intention. First, our results indicate that job stress relates positively to turnover intention. It also shows that the mediating model is supported as hypothesized 1 and 2, indicating that job stress has both a direct effect on turnover (Hypothesis 1) and an indirect effect on turnover intention through the reduction of an employee's perceived job satisfaction (Hypothesis 2). This is largely consistent with prior research suggesting the potential mediating process which may affect the turnover intention of employees based on negative stressors experienced on the job, and the employee's feeling of an inability to affect change in the workplace (Cavanaugh, Boswell, Roehling, & Boudreau, 2000; Gilboa, Shirom, Fried, & Cooper, 2008). Overall, stress is an emotional tool that reduces job satisfaction and increases turnover consistent with Gilboa et al. (2008).

Secondly, we do not have strong evidence that perceived organizational justice can moderate the strength of the relationship between job stress and turnover intention by the employees at an organization, as predicted in Hypothesis 3. We examine the possibility of whether perceived organizational justice can mitigate the negative effects of job stress on employee turnover intention. Building on the JDR model, we believe perceived organizational justice is considered as a significant resource within organizations in mitigating the negative aspect of job stress on employee outcomes such as turnover (Monnot & Beehr, 2014; Topcic, Baum, & Kabst, 2016). One reason for this absence might be that perceived organizational justice can also be a source of stress, concerning the idea that perceived organizational justice as a positive resource (as hypothesized) could be offset with the negative aspects of experiencing stress on the job. This is consistent with Zohar (1995) in that the employee perception of role injustice constitutes an additional source of stress. Specifically, Zohar (1995) suggests that perceived unfairness by the employee may signify the effect of role ambiguity, role overload, and role conflict on job stress. Moreover, work overload and role overload are particularly associated with potential stressors, thereby canceling each other out through a kind of mutual opposition of forces. Thus, we do find little evidence supporting moderating the role of perceived organizational justice.

CONCLUSION

Based on the results, this study has the following contributions. Mixed findings in a literature review have characterized the prior research on the effects of job stress on employee turnover. For instance, several studies call for the need to extend the effect of job stress on employee outcomes (Hammer & Tosi, 1974; Ning, Zhong, Libo, & Qiujie, 2009). In this vein, this study investigates the potential process variables in understanding the effect of the job stress-turnover relationship. Moreover, such mixed or conflicting empirical results regarding the effect of stress on employee turnover may indicate that organizations differ in their capability of managing the consequences of job stress. Thus, the authors have explored the possibility that the incidence of perceived organizational justice may mitigate the effect of these value-decreasing job stressors on employee turnover.

Based on job demands-resources (JDR) model, the relationship between job stress and turnover intention is evidenced by the mediating effect of job satisfaction but may account for an absence of the moderating effect of perceived organizational justices (López Bohle, Chambel, & Diaz-Valdes Iriarte, 2017). Specifically, the effect of moderating variables in determining the strength of the stress-turnover relationship is a potential venue calling for future research. Besides, a study of incorporating individual and
firm-level data will be valuable in investigating how an organization’s employees respond to managing job stress in the use of a variety of company-wide policies and practices such as HRM practices, which is largely created to help manage job stressors and prevent turnover issues. Furthermore, although we do find little evidence supporting moderating the role of perceived organizational justice in mitigating the harmful effects of job stress, it still calls for exploring and experimenting with other organizational efforts to discover how potential job stressors might be managed for better performance as well as for retaining human resources.

The study also has limitations that suggest the need for future studies and refinements. First, this study did not have separate response sources for the review of independent and development variables, thereby leading to the potential common method bias (CMB) problem because the same respondents provided all of the relevant data that was used in the study. The authors confirmed that CMB is least likely when conducting Harman’s one-factor test. Second, several important individual attributes that influence the main variables in the study were not included in this study, such as the incidence of a locus of control (LOC), growth need strength, self-esteem, and the impact of negative affectivity. Lastly, the authors did not adopt a multilevel analysis to simultaneously investigate the related and associated organizational- and individual-level variables. The approach of individual-level variables as the unit of analysis was appropriate in this case because the study aimed to examine the relationship between job stress, individual perceptions of job satisfaction, and turnover intention. However, multilevel analysis is preferred when reviewing the impact of organizational justice on the employee’s stress levels and turnover intention. Future research calls for a study incorporating multilevel analysis to examine the impact of multilevel organizational variables on individual outcomes.

REFERENCES


