檢視職業承諾對於心理契約違反的影響 Examining the Moderating Effect of Occupational Commitment on Contract Breach-Job Stress Relations

葉穎蓉¹ Ying-Jung Yvonne Yeh

國立台灣科技大學 企業管理學系

Department of Business Administration, National Taiwan University of Science and Technology

胡昌亞 Changya Hu

國立政治大學 企業管理學系

Department of Business Administration, National Chengchi University

摘要:本研究探討員工面臨雇主違背心理契約的時候,職業承諾是否調節知覺雇主違背心理契約與員工工作壓力的關係。本研究樣本取自於北部地區三所地區醫院,共回收有效問卷 364。本研究發現,當員工感受到雇主違反心理契約時,會有較高的工作壓力;而且,這兩者的正向關連,會因為員工的情感性職業承諾則沒有此調節影響。有別於過去知覺心理契約之研究多半專注在員工的組織承諾所扮演之角色,本研究從職業承諾觀點來出發,發現情感性職業承諾會調節心理契約違反與壓力反應的關係。研究最後,也提出管理意涵及未來研究方向。

關鍵字:職業承諾;心理契約;工作壓力;壓力源;社會交換關係

Corresponding author: Department of Business Administration, National Taiwan University of Science and Technology, Taipei City, Taiwan, E-mail: yyeh@ba.ntust.edu.tw The authors gratefully acknowledge the constructive comments of the two anonymous reviewers and the sponsorship from the National Science Council (project number NSC 95-2416-H-011-017)

Abstract: The authors examine the moderating effect of occupational commitment on job stress when employees perceive employer's violations of psychological contracts. Data gathered from 364 nurses show a positive association between perceived breaches of psychological contracts and job stress. The data also indicate that this association intensifies as level of affective occupational commitment increases, suggesting an exacerbating effect of affective commitment. However, no moderating effect was observed for continuance occupational commitment. Research and managerial implications are discussed.

Keywords: Occupational commitment; Psychological contract breach; Job stress; Job stressor; Social exchange relationship.

1. Introduction

Recent research has focused on the impact of exchange relationships on employee behavior from a perspective of *psychological contracts*-defined as employee beliefs regarding reciprocal obligations between them and their organizations (Morrison and Robinson, 1997; Rousseau, 1989). Among the many concepts specified in the theory of psychological contract, contract breaches (i.e., when either party perceives the other as failing to fulfill its obligations) have received much research attention because it can generate distrust, feelings of violation, dissatisfaction, or relationship dissolution (Morrison and Robinson, 1997; Raja, Johns and Ntalianis, 2004; Robinson and Morrison, 2000; Rousseau, 1989). Lack of reciprocity is considered a crucial work-related stressor that can lead to symptoms of emotional distress (anger, anxiety, or helplessness) or health problems such as coronary heart disease (Bakker, Schaufeli, Sixma, Bosveld, and van Dierendonck, 2000; Geurts, Buunk and Schaufeli, 1994; Niedhammer, Tek, Starke and Siegrist, 2004; Peter and Siegrist, 1999). Although contract breach is a type of lack of reciprocity in the employment relationship (Coyle-Shapiro and Kessler, 2002), the

role of contract breach in employee outcomes is rarely examined in job stress literature. According to scholars in the field of job stress, "stressor" is defined as an environmental demand or stimuli that may tax or exceed a person's resources to meet the challenges, and endanger his or her well-being (i.e. poor mental or physical health or well-being (Lazarus and Folkman, 1984). "Stress" is an individual's psychological and physiological responses to the stressor. Since the literature on psychological contract breach has suggested that contract breach is frequently associated with negative effects (Zhao, Wayne, Glibkowski and Bravo, 2007), it may lead to experienced stress and physical complaints (Maslach, Schaufeli and Leiter, 2001). However, there is a paucity in studies that links psychological contract breach to stress reactions. To narrow this research gap, the first purpose of this study was to investigate whether the contract breach perceived by the employee is a stressor that may induce the stress reactions.

The subjective nature of psychological contracts dictates that responses to breaches depend on individual interpretations (Ho, Weingart and Rousseau, 2004; Morrison and Robinson, 1997; Raja et al., 2004; Robinson and Morrison, 2000). Among the many factors that may affect these interpretations, the extent to which that an employee perceives the job itself is important to him/her may be particular relevant to such interpretation. For employees who perceive the job as a part of selfidentity, the work experience may have a greater impact on their attitudes and behaviors. Therefore, occupational commitment, which is, one's commitment to an occupation, profession, or career (Morrow, 1983), may be an important factor that influence how employees interpret psychological contract breach. Occupational commitment has been identified as a reliable predictor of employee work attitudes and behaviors (Meyer, Allen and Smith, 1993; Snape and Redman, 2003). A number of job stress researchers have proposed that *commitment* acts in a similar manner in terms of moderating how individuals respond to stressful events (Irving and Coleman, 2003; Leong, Furnham and Cooper, 1996). Some believe that it has a buffering effect on the stressor-stress relationship (Antonovsky, 1979; Begley and Czajka, 1993;

Kobasa, 1982), while others argue that it exacerbates reactions to stressors (Irving and Coleman, 2003; Lazarus and Folkman, 1984; Mathieu and Zajac, 1990). With recent adoption of flexible work arrangements by enterprises, job stability and security in the traditional employment relationship have gradually eroded. As employers continually violate their promises, employees in turn have attenuated their organizational commitment. Furthermore, with the rise of boundaryless career (Arthur, 1994), employees become more concerned about employability or professional advancement of their own (Cappelli, 1999). An increasing number of scholars (e.g. Cappelli, 1999; Johnson, 1996; Meyer and Allen, 1997; Snape and Redman, 2003) hold the viewpoints that the contingency nature of the workforce, resulting from organizational instability and flexible employment arrangements, is causing employees to shift their commitment from "increasingly transient work organizations to the relative stability of their occupations" (Snape and Redman, 2003, p.152). However, few researchers have looked at the effects of occupational commitment and its mix of core values, career orientation, and personality on organizational behavior. Meyer et al., (1993) found that occupational commitment is not only related to occupation-relevant activity, but also related to organizationrelevant behavior. Moreover, they also demonstrated that when investigating organizational behaviors, commitment to different entities (e.g. occupation) cannot be ignored, in addition to different forms of commitment to the same entity (e.g. organization). Accordingly, the second purpose of this study was to investigate how occupational commitment influences reactions to contract breaches. The present research contributes to organizational behavior literature by first, identifying the role of psychological contract breach in work-related stress, and second, investigating the role of occupational commitment, an increasingly important factor, in one's interpretation of contract breach.

1.1. Psychological Contract Breach and Job Stress

The most studied stressors in job stress research are associated with job

characteristics, including job ambiguity, role conflicts, and job demands (Spector and Jex, 1998). Some researchers have examined the social relation aspects of job stressors-for example, supervisor support or perceived organizational support (Frone, 2000; Janssen, 2004; Turner, 1981). Less attention has been paid to stressors tied to the organizational dimensions of a work environment. Pines (1982) argued that these types of stressors (e.g., bureaucratic resistance, organizational policy, or communication problems) are as critical to employee burnout as job and social dimensions. It is not our intention to identify organizational stressors in this paper; instead, acknowledgment is given to organizational obligations in the eyes of employees and the consequences of not fulfilling them at a satisfactory level. Psychological contracts are developed when "organizational agents (recruiters, direct supervisors, human resource managers) make certain promises to employees about what they can expect from the organization" (Turnley and Feldman, 1999, p. 898). Perceptions of contract breaches can result from unrealistic expectations that develop from the recruitment stage forward due to miscommunication, lack of communication, or lack of reciprocity between the two parties.

According to Blau (1964), social exchange relationships are based on the reciprocity principle. In the employment relationship, companies offer job security and predictable advancement in return for employee loyalty and good performance. According to Rousseau (1990), employees believe that employers are obligated to provide sufficient pay and career advancement opportunities in exchange for hard work, and to give job security in exchange for loyalty and minimum length of stay. As Morrison and Robinson (1997) note, a breach occurs when employees perceive that their organizations have failed to fulfill these obligations.

Researchers have identified specific responses to perceived contract breaches: feelings of violation, decreased job satisfaction (Ho *et al.*, 2004; Raja *et al.*, 2004; Robinson and Morrison, 2000; Zhao *et al.*, 2007), lack of trust in an organization (Robinson and Rousseau, 1994), decreased organizational commitment (Coyle-Shapiro and Kessler, 2000; Zhao *et al.*, 2007), reduced in-role participation and fewer

extra-role behaviors (Lester and Kickul, 2001), fewer organizational citizenship behaviors (Coyle-Shapiro and Kessler, 2000; Restubog, Bordia and Tang, 2007; Robinson and Morrison, 2000; Zhao *et al.*, 2007), and an increase in deviant behaviors (Restubog *et al.*, 2007).

Past research pointed out that when employees perceived being betrayed by the organization, the feelings of anger, frustration, bitterness or even outrage occur (Morrison and Robinson, 1997). The reduced predictability and control may consequently lead to stress for the individual (Shore and Tetrick, 1994; Gakovic and Tetrick, 2003). According to Peter and Siegrist's (1999) effort-reward imbalance model, lack of reciprocity is a crucial work-related stressor. The imbalance includes having a demanding but unstable job, or being forced to achieve at a higher level without a promotion in return. Their study concluded that these work-related stimuli may trigger psychological (e.g., anger, frustration, anxiety, helplessness) or physiological responses (e.g., neuro-hormonal and immune reactions that increase the risk of cardiovascular disease). Since perceived psychological breach is a manifestation of lack of predictability and imbalance of effort-reward in the work place, we argued that that perceived contract breaches can induce employee stress reactions, both psychological and somatic. This hypothesis is expressed as:

H1: Perceived psychological contract breaches are positively associated with job stress.

1.2. Occupational Commitments as Moderators

Individuals interpret perceived breaches differently and thus react to breaches in different ways (Ho et al., 2004; Morrison and Robinson, 1997; Raja et al., 2004; Robinson and Morrison, 2000). Specifically, Morrison and Robinson (1997) suggest that reactions to perceived contract breaches are based on an individual's sensemaking process, while Robinson and Morrison (2000) assert that attributions and fairness perceptions interact with perceived breaches when individuals analyze their

feelings regarding violations. Raja *et al.*, (2004) report that personality traits moderate the relationship between contract breaches and emotional responses-that is, an individual with a strong internal locus of control and/or equity sensitivity is more likely to associate breach experiences with feelings of violation.

The same perspective that individual differences moderate the interpretation of work experience can be found in the job stress literature. For example, Irving and Coleman (2003) reported that individual differences in areas such as locus of control and situational factors such as social support are among the most studied variables in predicting how one reacts to stressors. Other scholars (Irving and Coleman, 2003; Leong *et al.*, 1996; Siu and Cooper, 1998) that examined the role of organizational commitment in the relationship of job stressors and stress reactions have reported mixed findings. Specifically, Begley and Czajka (1993), Hochwarter, Perrewé, Ferris and Guercio (1999), and Siu and Cooper (1998) have all identified a buffering effect from organizational commitment. However, Leong *et al.*, (1996) failed to find a moderating effect even though they observed a direct link between organizational commitment and stress. Irving and Coleman (2003) make a distinction between affective and continuance organizational commitment, and suggest an exacerbating effect for both forms.

We offer two potential reasons why these inconsistencies may occur. First, it may be a result of an overestimation of the moderating effect of organizational commitment. Mathieu and Zajac (1990) are among several research teams suggesting that low organizational commitment is a consequence of work-related stressors and vice versa (see also Boswell, Olson-Buchanan and LePine, 2004; Leong *et al.*, 1996; Siu and Cooper, 1998). It may not be able to explain the attribution processes when one reacts to the stressors. However, occupational commitment-that is, an individual's commitment to a specific occupation, profession, or career (Morrow, 1983)-is more stable than organizational commitment and less likely to be influenced by external stimuli within the organizations. Second, the changing nature of work has made the role of occupational commitment an important antecedent to employee

outcomes and that understanding of organizational behaviors can be enhanced by incorporating occupation-related variables into the research models (Lee, Carswell, and Allen, 2000). Since occupational commitment also represents belief in and acceptance of the values of a chosen occupation (Vandenberg and Scarpello, 1994), when faced with work-related demands that constrain or otherwise interfere with work achievement, employees may choose to leave an organization but not necessarily change their occupation. Employees with different levels of occupational commitment may react to such job stressor related to the organization differently because the occupation has different meanings to them. According to Rousseau (2001), one's professional ideology is often established prior to encountering specific employers. On the basis of the above statements, we argue that occupational values play a role in attribution processes that influence the range of reactions to broken promises beyond and above the influence of organizational commitment.

There are two competing perspectives for predicting the effect of commitment on the stressor-stress relationship: exacerbating or buffering. Supporters of the first perspective (e.g., Lazarus and Folkman, 1984) have suggested that commitment increases an individual's vulnerability to psychological threats-in other words, those who make emotional investments in organizations may experience greater stress (Mathieu and Zajac, 1990). Supporters of the second perspective (e.g., Antonovsky, 1979; Begley and Czajka, 1993; Kobasa, 1982) argue that commitment creates a sense of belonging by allowing employees to find value in their work, thus diverting attention from stressful events.

We believe there are three reasons why occupational commitment may exacerbate the negative relationship between psychological contract breach and stress reactions. First, commitment serves as a factor in vulnerability (Lazarus and Folkman, 1984). In identifying cue-sensitivity as a mechanism, Lazarus and Folkman argued that "commitments influence appraisal through the manner in which they shape cue-sensitivity" (p. 57). They used the example of a rejection from medical school being much more harmful to a student who has a strong commitment to becoming a doctor

than to a student who considers medicine as one of several career choices. In a similar fashion, we argue that when individuals are committed to a profession, they become more sensitive to how the job rewards reciprocate their input, and are inclined to intensify discrepancies between their expectations and reality. In other words, the greater the strength of the occupational commitment, the more frustrated employees feel when employers fail to fulfill their promises.

Second, cognitive dissonance theory may explain (at least in part) the exacerbating role of occupational commitment. Festinger (1957) suggested that employees are likely to experience cognitive dissonance when they are required to deal with incongruent goals among multiple coalitions. For example, conflict is likely to occur when workers experience strong attachment to their occupations but feel betrayed due to unfair treatment on the part of their employers. Elliot and Devine (1994) suggest that individuals search for and implement strategies such as exiting to alleviate dissonance resulting from perceptions of inconsistency. However, they also suggest that individuals must experience psychological discomfort before taking action. Along the same line of thinking, Rousseau (2001) suggests that the ways in which workers perceive their professional values in the workplace may explain differences in their responses to their environments. Conflict occurs when professional ideologies differ from organizational values. As a result, given the same level of an employer's contract breaches, greater level of stress will be felt by those employees placing greater value in their occupations. Therefore, we argue that the higher one's occupational commitment, the greater the chances an individual will experience dissonance and discomfort when perceiving contract breaches.

Finally, the role of occupational commitment in the job stressor-burnout relationship may be explained by Reilly's (1994) employed identity theory. Reilly posited that highly committed workers have a more organized and salient set of role-relevant meanings compared to those held by less committed workers. Therefore, distress resulting from inconsistencies with role expectations should be greater for those with stronger ties to those roles. Reilly observed that workers who are more

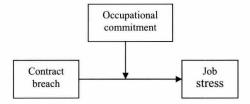
strongly committed to their nursing careers react more negatively when they experience work-related stress. Her findings support the "exacerbation" point of view described above. In a similar manner, Rousseau (2001) believes that psychological contract formation is partly a product of employment occupation ideology. Employees who have strong commitments to their occupations may have role expectations that are best described as ideological. It is this ideal that attracts them to their chosen profession. Consequently, the higher the expectations based on these ideals, the greater the potential disappointment.

Based on this background, our second hypothesis is expressed as:

H2: Occupational commitment moderates the relationship between perceived breaches of psychological contracts and job stress such that workers who are more committed to their occupation will experience more stress than those who are less committed when they perceive contract breaches.

The study framework is presented in Figure 1.

Figure 1
Research Framework



Researchers have treated occupational commitment as a multi-dimensional construct (Blau, 2003; Irving, Coleman and Cooper, 1997; Meyer and Allen, 1991; Meyer *et al.*, 1993). To explain occupational commitment, Meyer *et al.*, expanded

their three-component model of organizational commitment: affective (value-based), normative (obligation-based), and continuance (costs and benefits-based). In spite of general agreement that the nature of one's commitment may explain differences in organizational behaviors, few researchers have focused on these distinctions when examining the moderating effects of occupational commitment on the stressor-stress relationship.

Although scholars have identified the moderating roles of continuance and affective organizational commitments in the stressor-strain relations (Irving and Coleman, 2003), we were unable to identify studies that distinguish continuance from affective occupational commitment when analyzing their potential moderating effects. Furthermore, Irving and Coleman (2003) found that both types of organizational commitments intensify the stressor-stress relationship. Their findings suggest that whether employees with strong organizational commitment remain with the organization because of emotional attachment (affective commitment) or lack of alternatives (continuance commitment), these individuals are more susceptible to the negative impacts of organizational stressors. In other words, their study supports the argument that commitment makes workers more vulnerable to occupational stress.

Given that no available study has examined the differentiating roles of different forms of occupational commitment in the job stressor-stress relations, we followed the suggestion by Irving and Coleman (2003) and examined the moderating effects of affective and continuance occupational commitment on the stressor-stress relationship.

2. Method

2.1. Sample

The questionnaires were sent to the three urban hospitals in northern Taiwan. Of 600 questionnaires distributed to nurses (100% female) working in the hospitals, 364 were completed and deemed usable (61% response rate) on a drop-in basis. Compared with studies published in the major academic journals, the response rate in this study did not show a deviation from the acceptable norm (within one SD of the average) and might not be threatened by non-response bias²(Baruch and Holtom, 2008).

Among the respondents, 87 percent were between the ages of 20 and 35, 53 percent were married, 63 percent were employed full-time, 35 percent were employed as part-time or contract nurses, and 41.3 percent had worked in their current hospital for 4 to 9 years. The majority of the sample (63%) held baccalaureate or advanced degrees in nursing.

2.2. Psychological Contract Breach Measure

A five-item measure developed by Robinson and Morrison (2000) was used to assess global perceptions of contract breaches. Items were designed to reflect employees' cognitive-focused perceptions of how well their organizations fulfilled their obligations. Robinson and Morrison (2000) suggest that this instrument offers an overall assessment of an employer's obligation fulfillment, which is consistent with existing conceptualizations of psychological contract breaches (see also Robinson, 1996; Rousseau, 1989). Responses were asked to answer the items on a 1-5 scale ranging from "strongly disagree" to "strongly agree." Sample items include "I

According to the analysis by Baruch and Holtom (2008), the average response rates in health care industry and if the questionnaires were completed in-person/drop-in were 53.8% (SD = 20.0), and 62.4% (SD = 16.9) respectively. The analysis for whether the respondents are different from the non-respondents should be conducted if there is a deviation from the norm (one SD of the average).

have not received everything promised to me in exchange for my contributions" and "I feel that my employer has fulfilled the promises made to me when I was hired" (reverse scored). The coefficient alpha for this scale was 0.70.

Our choice of this global measure instead of a composite measure (e.g., discrepancies in scores between obligations and fulfillment using a list of psychological contract items such as pay, training, or job security) is based on two reasons. First, we do not intend to identify whether psychological contract breach in a specific area as a job-stressor. Rather, our goal was to examine overall employee evaluations of the extent to which their organizations fulfilled their obligations, as well as the consequences of failures to do so. Second, McLean Parks, Kidder and Gallagher (1998) note that developing an appropriate set of psychological contract content measures applicable to all employees in today's complex employment environment is difficult, if not impossible.

2.3. Occupational Commitment Measure

Affective and continuance occupational commitment items (six for each type) were taken from the occupational commitment scales developed by Meyer *et al.*, (1993). Items such as "I am proud to be in the nursing profession" and "I dislike being a nurse" (reverse scored) address affective occupational commitment. Items such as "Changing professions now would be difficult for me to do" or "It would be costly for me to change my profession now" address continuance commitment. Responses were recorded on the same five-point scale as for the psychological contract breach measure, with a high score indicating a high level of commitment. Alpha reliabilities were 0.83 and 0.82 for affective and continuance occupational commitment, respectively.

2.4. Job Stress Measure

This measure was adapted from Benoliel, McCorkle, Georgiadou, Denton and Spitzer's (1990) Nurse Stress Checklist. Of the five domains identified in their study,

we selected the "personal reaction" subset to measure psychological, physical, and behavioral responses to stressful workplace situations. The other four domains are more closely linked to job stressors (i.e., the environmental work demands described in an earlier section or work concerns related to knowledge and professional competence) that are beyond the scope of this study. Sample items include "I have felt helpless," "I have felt frustrated," "I have been low on energy," "I have felt tense," and "I have felt anxious." Responses were recorded on a five-point (agree/disagree) scale. Reliability alpha was calculated as 0.93.

2.5. Control Variables

Length of service with current employer, job status, marital status, and educational level were used as control variables due to their potential for exerting confounding effects. Age was not included because of its correlation with length of service. Job status was coded as 1 for full-time employees and 0 for part-time/contract employees. Marital status was coded as 1 for married and 0 for unmarried. Educational level was coded as 1 for college degree holders and 0 for employees who had received 3 to 5 years of professional nursing training. In addition, Meyer *et al.*, (1993) suggested that how an employee behaves on the job may be influenced jointly by commitment to the organization and to the occupation. Therefore, we included affective and continuance organizational commitment in regression analyses as control variables. Alpha reliabilities were 0.85 and 0.71 for affective and continuance organizational commitment, respectively.

3. Results

3.1. Descriptive Statistics

Data on mean, standard deviation, and correlation coefficients are shown in Table 1. Overall, the respondents reported moderate levels of affective and

continuance occupational commitment and low levels of perceived contract breaches and job stress. Job stress was positively correlated with perceived psychological contract breaches (r = .27, p < .01), negatively correlated with affective occupational commitment (r = -.41, p < .01), and negatively correlated with seniority, marital status (married workers reported less stress) and employment status (full-time workers reported less stress). No significant correlations were observed between job stress and continuance occupational commitment or education, or between continuance occupational commitment and psychological contract breaches. The positive correlation between continuance occupational commitment and affective occupational commitment was statistically significant, but with a small effect size (r = .15, p < .01).

To provide evidence for convergent and discriminate validities, we conducted the confirmatory factor analysis following the suggestions by Anderson and Gerbing (1988). Results showed that the factor loadings of all items were significant in six factors (contract breach, job stress, affective and continuance organizational commitment, and affective and continuance occupational commitment), providing the evidence for the convergent validity. In addition, the CFA results also showed that all the confident intervals of covariance did not include the value of 1, suggesting all the variables are distinguishable.

3.2. Regression analysis

Hierarchical regressions were performed with and without two forms of organizational commitment as control variables. In Model 1 (See Table 2), demographic variables were entered at Step 1 of the equation as control variables, followed by the main effects (occupational commitment and psychological breaches) at Step 2 and mean-centered interaction terms (Ping, 1996) at Step 3. In Model 2 (See Table 2), two forms of organizational commitment were included as control variables along with demographic variables at Step 1 of the equation, and followed by the same procedures performed in Model 1.

Results are summarized in Table 2. As shown in Model 1, the control variables accounted for 8 percent of the variance in job stress (F = 4.94, p < .01), contract breach, affective and continuance occupational commitment accounted for an additional 18 percent ($\Delta F = 26.9$, p < .01), and the interaction term accounted for 2 percent ($\Delta F = 3.49$, p < .05). As shown in Model 2, the control variables (including both forms of organizational commitment) accounted for 19% of the variance in job stress (F = 10.28, p < .01). Contract breach, affective and continuance occupational commitment accounted for an additional 9 percent ($\Delta F = 14.67$, p < .01), and the interaction term accounted for 1 percent ($\Delta F = 2.70$, p < .05). The results for H 1 and 2 are consistent, with or without controlling for the two types of organizational commitment.

Table 1
Means, Standard Deviations, Correlations and Reliabilities^a.

		Mean	SD	1	2	3	4	5	6	7	8	9	10
1.	Tenure ^b	3.00	1.44										
2.	Work status c	.65	.48	.39**									
3.	Marital status d	.53	.48	.51**	.24**								
4.	Education ^e	.64	.48	.03	.07	.04							
5.	Aff. org. commit.	3.48	.68	.38**	.23**	.22**	.07	(.85)					
6	Con. org. commit.	3.24	.65	.27**	.19**	.20**	.06	.28**	(.71)				
7.	Aff. occ. commit.	3.66	.70	.26**	.17**	.16**	.01	.50**	.16**	(.83)			
8.	Con. occ. commit.	3.42	.71	.21**	.13*	.20**	.01	.23**	.52**	.15**	(.82)		
9.	Contract breach	2.78	.77	05	10	.04	.02	31**	13*	30**	07	(.70)	
10	Job stress	2.84	.57	27**	13*	16**	05	41**	02	41**	.05	.27**	(.93)

^a n = 364; alpha reliabilities are in parentheses.

^b 1 = less than 1 year; 2 = 1~less than 3 years; 3 = 3~less than 6 years; 4 = 6~less than 9 years; 5 = 9~less than 12 years; 6 = 12~less than 15 years; 7 = 15 years or more.

^{° 0 =} part-time or contract employee; 1 = full-time formal employee.

d 0 = not married; 1 = married.

e 0 = 3~5 professional nursing school; 1 = college or equivalent.

p<.05, ** p<.01

H1 (predicting a positive association between a perceived contract breach and job stress) was supported since perceived contract breaches were positively related to job stress among the participating nurses ($\beta = .19$ and .15, p < .01) in the two regression models, respectively). This confirms that employee perceptions of psychosocial contract breach can induce emotional stress in the form of frustration, helplessness, and powerlessness. *H2* (predicting a moderating effect of affective and continuance occupational commitment on contract breach-associated stress) only received partial support since the moderating effect was only observed for affective occupational commitment ($\beta = .13$, p < .01 in Model 1, and .11, p < .05 in Model 2), not the continuance occupational commitment. Furthermore, affective occupational commitment and continuance occupational commitment exhibit different direct effects on job stress: negative for the affective occupational commitment ($\beta = .33$, p < .01 in Model 1, and -.25, p < .01 in Model 2), and positive for the continuance occupational commitment ($\beta = .18$, p < .01 in Model 1, and .20, p < .01 in Model 2).

To further analyze the moderating role of affective occupational commitment, we adopted a procedure outlined in Aiken and West (1991) by examining the simple slopes of the job stress on perceived psychological contract breach at high (one standardized deviation above the mean) and low (one standardized deviation above the mean) affective occupational commitment conditions. As shown in Figure 2, the simple slope at the high affective occupational commitment condition exceeded it at the low level condition, indicating that affective occupational commitment strengthens the relationship between contract breach and job stress. Thus, the exacerbating effect of affective occupational commitment was supported by our data such that nurses who are strongly committed to their occupation due to affective factors were found to be more vulnerable to job stress when they perceived that their employers did not fulfill their promises, even though they reported lower levels of stress compared to those who were less committed.

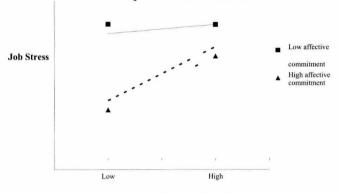
Table 2
Results of Moderated Hierarchical Regression Analyses for Job Stress

	Model 1		Model 2		
	В	R^2 (ΔR^2)	В	R^2 (ΔR^2)	
Step 1. Control Variable					
Hospital 2 (dummy)	.04		.10		
Hospital 3 (dummy)	.04		.17*		
Tenure in organization	24**		10		
Job status	03		03		
Education level	03		02		
Marital status	03	.08**	04		
Affective org. commit.			21**		
Continuance org. commit.			.01	.19*	
Step 2. Main Effects					
Contract breach	.19**		.15**		
Affective occup, commit.	.19** 33** .18**		.15** 25** .20**		
Continuance occup. commit.	.18**	.26**	.20**	.29**	
specification reconstitution and an electrical frame service.		.26** (.18**)		(.09**)	
Step 3. Interaction Effects		. ,			
Breach * affective	.13**		.11*		
Breach * continuance	02	.27**	01	.30**	
	102=	(.02*)	5.50	(.01 [*])	

4. Discussion

Consistent with the premises of imbalanced social exchange relations, our findings support the idea that the perceived psychological contract breaches relate positively to stress responses such as anxiety, fatigue, and helplessness in the workplace (Buunk, Doosje, Jans and Hopstaken, 1993; Geurts *et al.*, 1994; Geurts, Schaufeli and Rutte, 1999; Niedhammer *et al.*, 2004) Our findings also extend the outcomes of psychological contract breaches to job stress reactions (Morrison and Robinson, 1997; Raja *et al.*, 2004; Robinson and Morrison, 2000) and support our assumption that contract breach is a work-related stressor.

Figure 2
Plot of Interaction Between Psychological Contract Breach and Affective
Occupational Commitment



Psychological Contract Breach

Our findings also highlight the role of occupational commitment on employee outcomes above and beyond the influence of organizational commitments. Meyer *et al.*, (1993) suggested that occupational commitment did make a significant contribution to the prediction of organization-relevant outcomes even when organizational commitment was controlled. Our results also extend this line of literature by demonstrating a similar effect in the job stressor-stress relations. According to the interaction plot shown in Figure 2, nurses who are more committed to their occupation in terms of emotional attachment are likely to have stronger stress reactions to perceived contract breaches than nurses who are less committed. However, since there is a significant and negative relationship between the occupational commitment and job stress (M1: β = -.33, p < .01; M2: β = -.25, p < .01), implying that affection for an occupation plays a complicated role in job stress. That is, although employees with high occupational commitment are less likely to experience job stress, these individuals are more sensitive to such type of job stressor once they start to feel stressed. Furthermore, the near flat line for the low

occupational commitment employees may implies a ceiling effect for these individuals. Specifically, those individuals are so susceptible to perceived psychological contract breaches that a small amount of breaches can result in a high level of stress reactions. In short, although affective occupational commitment related negatively to job stress reactions, is insufficient for either diverting attention away from a stressful event or alleviating harm caused by an unsupportive work environment. This finding supports the exacerbation (as opposed to buffering) assumption that commitment increases vulnerability (Lazarus and Folkman, 1984). No such effect was found for continuance occupational commitment, suggesting that continuance occupational commitment based on cognitive assessments of costs and benefits may not trigger the same level of emotions as affective occupational commitment, since individuals in the first category do not invest their emotions as much as those in the second.

Results from our regression analyses failed to identify a moderating effect for continuance occupational commitment on the stressor-stress relationship. Meyer and Allen's (1991) model posits that continuance commitment is based on calculations of costs and benefits. Our results show that employee responses to employer contract breaches do not vary across "calculative" occupational commitments, thus suggesting a "detached" (rather than exacerbating or buffering) role for continuance occupational commitment. This conflicts with Irving and Coleman's (2003) finding of an exacerbating effect of continuance organizational commitment on the stressorstress relationship. The inconsistency may be due to a different focus of commitmentoccupational versus organizational-in the two studies. The perceived cost of changing an occupation may be irrelevant to perceived psychological contract breaches, as showing in our result (r = -.07, p > .05). Therefore, although continuance occupational commitment was positively related to job stress, it did not moderate the psychological contract breach - job stress relations. Moreover, both studies conducted the surveys with samples from only one occupation (nurses in our sample, and government employees in Irving and Coleman's). We suggest performing metaanalysis or investigation in other occupations to see if more_consistent results can be reached.

Cappelli (1999) has suggested that since lifetime employment is no longer guaranteed, employees are encouraged to turn their attention to professional advancement outside their firms. Those who consider their occupation to be a good investment may place more value on what the occupation provides than how the organization treats them. Along the same lines, the stressor-stress relationship may intensify for persons with high levels of continuance organizational commitment because they lack viable alternatives to staying with their current organizations. In contrast, workers with strong continuance occupational commitments are not as seriously affected by the stressor-stress relationship because they perceive themselves as having alternatives.

Although the data indicate that affective occupational commitment has an exacerbating effect on the stressor-stress relationship, it was negatively associated with job stress. Our observed negative correlation between affective commitment and job stress is consistent with results reported by Reilly (1994) and Irving and Coleman (2003) on organizational commitment. Regardless the entities of commitment, we can conclude that affective commitment is a beneficial factor to an organization when employees perceive that they are being treated fairly or have a healthy work environment. Contrarily, continuance commitment is positively associated with job stress. This is not surprising because those who are high with continuance commitment perceive less control over their environment, and are less likely to remove themselves from stressful work situations (Coleman, Irving, and Cooper, 1999).

We acknowledge several limitations to this study. The cross-sectional design limits its ability to provide causal inferences. Although occupational commitment is less likely to be influenced by social exchanges between employees and employers, we cannot exclude the possibility that low occupational commitment may be a consequence of psychological contract breach or job stress. Future researchers may

prefer to take a longitudinal approach to examine causal relationships between constructs.

Second, since all variables were measured in the same questionnaire, the findings are susceptible to problems associated with common method variance-that is, results may be distorted due to correlation inflation. We therefore performed a Harman's one-factor test (Podsakoff, MacKenzie, Lee and Podsakoff, 2003; Podsakoff and Organ, 1986) by entering all items into a factor analysis and examining the resulting unrotated factor solution. Podsakoff and Organ (1986) observed that when a single factor emerges, or when one factor accounts for most of the covariance in the predictor and criterion variables, a substantial common method variance exists. In this study, all 27 items (6 for affective occupational commitment, 6 continual occupational commitment, 4 psychological contract breach, and 11 job stress) were included in our principal component factor analysis. Using an eigenvalue of greater than one criterion, our analysis identified six factors, with the first explaining 28 percent of the variance. No general factor was identified from the unrotated factor solution. In other words, common method variance was not a serious threat to our findings.

According to Spector (2006), for many constructs incumbent self-reports are more accurate than data obtained from alternative sources. Frese (1985) concluded that methodological artifacts do not easily explain correlations between the two self-reported subjective measures of stress and psychosomatic complaint. Frese and Zapf (1988) also reported that relationships among constructs in stress research tend to be underestimated when data are obtained from different sources. Since all of our constructs involved the subjective feelings or attitudes of employees, we believe that incumbent self-reports represent a more valid source of data than alternating sources. Furthermore, some of our findings represent interaction effects. Since common method variance tends to uniformly inflate correlations among self-report measures, such statistical artifacts cannot be used to explain interaction effects suggesting that the relationship between two constructs varies across different groups (Schaubroeck

and Jones, 2000). Finally, it is not uncommon for stress studies to use self-reported data given the nature of the constructs (Lazarus and Folkman, 1984). In fact, with the awareness of common method variance owing to the self-report method, Lazarus and Folkman (1984) endorse "to use purely self-report data to generate what appear to be stable findings leading to empirically based principles and then check out these principles with other methods (p. 323)." Since the role of occupational commitment in the relationship of psychological contract breaches and job stress has rarely been examined, and we our study framework is theoretically driven, we think it is reasonable to explore our research topic using a less costly approach while addressing the potential disadvantage of such approach. Combined, we believe these factors show that the common method variance should not post a major threat to the value of our findings. Still, a longitudinal research design would be a preferable approach for studying psychological contract breaches and job stress.

It should be noted that although the breach global measure used in this study is commonly found in psychological contract research, Zhao *et al.*, (2007) have recently reported that the effect sizes of global measures are larger than those for composite measures for work-related outcomes. Since our results may be inflated due to our choice of measures, care should be taken in interpreting them. Future studies may also use the composite measures as it allows the researchers to examine the relationship between different aspect of psychological contract breach and job stress. By doing so, we can examine if the moderating effect of occupational commitment is partially salient in the relationships of certain types of psychological contract breach and job stress.

Finally, Becker (1992) has suggested that commitment researchers should make distinctions among foci and commitment bases. When examining "commitment as a factor in vulnerability" (as first proposed by Lazarus and Folkman, 1984), researchers need to take commitment complexity into account. Future researchers may wish to compare various commitment forms (e.g., value-based, obligation-based, or based on

cost/benefit assessments) and foci (e.g., occupational or organizational) when investigating commitment impacts.

Our results have implications for managers and researchers alike. They suggest that employer-employee relationships may benefit from improvements during the job preview and recruitment stages in terms of helping employees gain a clear understanding of what they should expect from the jobs they are considering. Communicating mutual obligations during the early stages of employment can also reduce the potential for psychological contract breaches. The results also imply that affective occupational commitment has an exacerbating effect on employee stress. Accordingly, managers need to give careful consideration to employees who are highly committed and attached to their occupations for affective reasons. These individuals are valuable to the organization because they are more likely to treat the occupation as a career or a calling rather than merely a job.

Researchers may be interested in examining stress outcome variables (e.g., organizational citizenship behavior, job satisfaction, and the intention to quit) to determine the interactive effects of psychological contract breaches and occupational commitment on stress outcomes.

7. References

- Aiken, L. S. and West, S. G. (1991), *Multiple Regression: Testing and Interpreting Interactions*, Newbury Park, CA: Sage.
- Anderson, J. C. and Gerbing, D. W. (1988), "Structural Equation Modeling in Practice: A Review and Recommended Two-Step Approach," *Psychological Bulletin*, 103(3), 411-423.
- Antonovsky, A. (1979), Health, Stress, and Coping, San Francisco, CA: Jossey-Bass.
- Arthur, M. B. (1994), "The Boundaryless Career: A New Perspective for Organizational Inquiry," *Journal of Organizational Behavior*, 15(4), 295-306.

- Bakker, A. B., Schaufeli, W. B., Sixma, H. J., Bosveld, W. and van Dierendonck, D. (2000), "Patient Demands, Lack of Reciprocity, and Burnout: A Five Year Longitudinal Study among General Practitioners," Journal of Occupational Behavior, 21(4), 425-441.
- Baruch, Y. Holtom, B. C. (2008), "Survey Response Rate Levels and Trends in Organizational Research," *Human Relations*, 61(8), 1139-1160.
- Becker, T. E. (1992), "Foci and Bases of Commitment: Are They Distinctions Worth Making?" *Academy of Management Journal*, 35(1), 232-244.
- Begley, T. M. and Czajka, J. M. (1993), "Panel Analysis of the Moderating Effects of Commitment on Job Satisfaction, Intention to Quit, and Health Following Organizational Change," *Journal of Applied Psychology*, 78(4), 552-556.
- Benoliel, J. Q., McCorkle, R., Georgiadou, F., Denton, T. and Spitzer, A. (1990), "Measurement of Stress in Clinical Nursing," *Cancer Nursing*, 13(4), 221-228.
- Blau, G. (2003), "Testing for a Four-Dimensional Structure of Occupational Commitment," Journal of Occupational and Organizational Psychology, 76(4), 469-488.
- Blau, P. (1964), Exchange and Power in Social Life, New York, NY: Wiley.
- Boswell, W. R., Olson-Buchanan, J. B. and LePine, M. A. (2004), "Relations between Stress and Work Outcomes: The Role of Felt Challenge, Job Control and Psychological Strain," *Journal of Vocational Behavior*, 64(1), 165-181.
- Buunk, B. P., Doosje, B. J. Jans, L. G. J. M. and Hopstaken, L. E. M. (1993), "Perceived Reciprocity, Social Support, and Stress at Work: The Role of Exchange and Communal Orientation," *Journal of Personality and Social Psychology*, 65(4), 801-811.
- Cappelli, P. M. (1999), The New Deal at Work: Managing the Market-Driven Workforce, Boston, MA: Harvard Business School Press.
- Coleman, D. F., Irving, P. G. and Cooper, C. L. (1999), "Another Look at the Locus of Control-Organizational Commitment Relationship: It Depends on the Form of Commitment," *Journal of Organizational Behavior*, 20(6), 995-1001.

- Coyle-Shapiro, J. and Kessler, I. (2002), "Exploring Reciprocity through the Lens of the Psychological Contract: Employee and Employer Perspectives," *European Journal of Work and Organizational Psychology*, 11(1). 69-86.
- Coyle-Shapiro, J. and Kessler, I. (2000), "Consequences of the Psychological Contract for the Employment Relationship: A Large Scale Survey," *Journal of Management Studies*, 37(7), 903-930.
- Elliot, A. J. and Devine, P. G. (1994), "On the Motivational Nature of Cognitive Dissonance: Dissonance as Psychological Discomfort," *Journal of Personality and Social Psychology*, 67(3), 382-394.
- Festinger, L. (1957), *A Theory of Cognitive Dissonance*, Stanford, CA: Stanford University Press.
- Frese, M. (1985), "Stress at Work and Psychosomatic Complaints: A Causal Interpretation," Journal of Applied Psychology, 70(2), 314-328.
- Frese, M. and Zapf, D. (1988), "Methodological Issues in the Study of Work Stress: Objective vs. Subjective Measurement of Work Stress and the Question of Longitudinal Studies," In C. L. Cooper and R. Payne (Eds.), Causes, Coping and Consequences of Stress at Work, 375-410.
- Frone, M. R. (2000), "Interpersonal Conflict at Work and Psychological Outcomes: Testing a Model among Young Workers," *Journal of Occupational Health Psychology*, 5(2), 246-255.
- Gakovic, A. and Tetrick, L. E. (2003), "Psychological Contract Breach as a Source of Strain for Employees," *Journal of Business and Psychology*, 18(2), 235-246.
- Geurts, S. A., Buunk, A. P. and Schaufeli, W. B. (1994), "Health Complaints, Social Comparisons and Absenteeism," *Work and Stress*, 8(3), 220-234.
- Geurts, S. A., Schaufeli, W. B. and Rutte, C. G. (1999), "Absenteeism, Turnover Intention and Inequity in the Employment Relationship," *Work and Stress*, 13(3), 253-267.
- Ho, V. T., Weingart, L. R. and Rousseau, D. M. (2004), "Responses to Broken Promises: Does Personality Matter?" *Journal of Vocational Behavior*, 65(2), 276-293.

- Hochwarter, W. A., Perrewé, P. L., Ferris, G. R. and Guercio, R. (1999), "Commitment as an Antidote to the Tension and Turnover Consequences of Organizational Politics," *Journal of Vocational Behavior*, 55(3), 277-297.
- Irving, P. G., Coleman, D. F. and Cooper, C. L. (1997), "Further Assessments of a Three-Component Model of Occupational Commitment: Generalizability and Differences across Occupations," *Journal of Applied Psychology*, 82(3), 444-452.
- Irving, P. G. and Coleman, D. F. (2003), "The Moderating Effect of Different Forms of Commitment on Role Ambiguity-Job Tension Relations," *Canadian Journal of Administrative Sciences*, 20(2), 97-106.
- Janssen, O. (2004), "The Barrier Effect of Conflict with Superiors in the Relationship between Employee Empowerment and Organizational Commitment," Work and Stress, 18(1), 56-65.
- Johnson, R. (1996), "Antecedents and Outcomes of Corporate Refocusing," *Journal of Management*, 22(3), 439-483.
- Kobasa, S. C. (1982), "Commitment and Coping in Stress Resistance among Lawyers," Journal of Personality and Social Psychology, 42(4), 707-717.
- Lazarus, R. S. and Folkman, S. (1984), Stress, Appraisal, and Coping, New York, N: Springer.
- Lee, K., Carswell, J. J. and Allen, N. J. (2000), "A Meta-Analytic Review of Occupational Commitment: Relations with Person- and Work-Related Variables," *Journal of Applied Psychology*, 85(5), 799-811.
- Leong, C. S., Furnham, A. and Cooper, C. L. (1996), "The Moderating Effect of Organizational Commitment on the Occupational Stress Outcome Relationship," *Human Relations*, 49(10), 1345-1363.
- Lester, S. W. and Kickul, J. (2001), "Psychological Contracts in the 21st Century: What Employees Value Most and How Well Organizations are Responding to these Expectations," *People and Strategy*, 24(1), 10-21.
- Maslach, C., Schaufeli, W. B. and Leiter, M. P. (2001), "Job Burnout," Annual Review of Psychology, 52(1), 397-422.

- Mathieu, J. E. and Zajac, D. M. (1990), "A Review and Meta-Analysis of the Antecedents, Correlates, and Consequences of Organizational Commitment," *Psychological Bulletin*, 108(2), 171-194.
- McLean Parks, J. Kiddler, D. L., Gallagher, D. G. (1998), "Fitting Squares Pegs into Round Holes: Mapping the Domain of Contingent Work Arrangements onto the Psychological Contract," *Journal of Organizational Behavior*, 19(special issue), 697-730.
- Meyer, J., P. and Allen, N. (1997), "Commitment in the Workplace: Theory, Research and Application," Thousand Oaks, CA: Sage.
- Meyer, J. P. and Allen, N. J. (1991), "A Three-Component Conceptualization of Organizational Commitment," *Human Resource Management Review*, 1(1), 61-89.
- Meyer, J. P., Allen, N. J. and Smith, C. A. (1993), "Commitment to Organizations and Occupations: Extension and Test of a Three-Component Model," *Journal of Applied Psychology*, 78(4), 538-551.
- Morrison, E. W. and Robinson, S. L. (1997), "When Employees Feel Betrayed: A Model of How Psychological Contract Violation Develops," *Academy of Management Review*, 22(1), 226-256
- Morrow, P. C. (1983), "Concept Redundancy in Organizational Research: The Case of Work Commitment," *Academy of Management Review*, 8(3), 486-500.
- Niedhammer, I. Tek, M. Starke, D. and Siegrist, J. (2004), "Effort-Reward Imbalance Model and Self-Reported Health: Cross-Sectional and Prospective Findings from the GAZEL Cohort." Social Science and Medicine, 58(8), 1531-1541.
- Peter, R. and Siegrist, J. (1999), "Chronic Psychosocial Stress at Work and Cardiovascular Disease: The Role of Effort-Reward Imbalance," *International Journal of Law and Psychiatry*, 22(5-6), 441-449.
- Pines, A. M. (1982), "Changing Organizations: Is a Work Environment without Burnout an Impossible Goal?" In W. S. Paine (Ed.), *Job Stress and Burnout* (pp. 189-212). Beverly Hills, CA: Sage.s

- Ping, R. A. (1996), "Improving the Detection of Interactions in Selling and Sales Management Research," *Journal of Personal Selling and Sales Management*, 16(1), 53-64.
- Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y. and 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.
- Podsakoff, P. M. and Organ, D. W. (1986), "Self-Reports in Organizational Research: Problems and Prospects," *Journal of Management*, 12(4), 531-544.
- Raja, U., Johns, G. and Ntalianis, F. (2004), "The Impact of Personality on Psychological Contracts," Academy of Management Journal, 47(3), 350-367.
- Reilly, N. P. (1994), "Exploring a Paradox: Commitment as a Moderator of the Stress-Burnout Relationship," *Journal of Applied Social Psychology*, 24(5), 397-414.
- Restubog, S. L. D., Bordia, P. and Tang, R. L. (2007), "Behavioural Outcomes of Psychological Contract Breach in a Non-Western Culture: The Moderating Role of Equity Sensitivity," *British Journal of Management*, 18(4), 376-386.
- Robinson, S. L. (1996), "Trust and Breach of the Psychological Contract," *Administrative Science Quarterly*, 41(4) 574-599.
- Robinson, S. L. and Rousseau, D. M. (1994), "Violating the Psychological Contract; Not the Exception But the Norm," *Journal of Organizational Behavior*, 15(3), 245-256.
- Robinson, S. L. and Morrison, E. W. (2000), "The Development of Psychological Contract Breach and Violation: A Longitudinal Study," *Journal of Organizational Behavior*, 21(5), 525-546.
- Rousseau, D.M. (1989), "Psychological and Implicit Contracts in Organizations," Employee Responsibilities and Rights Journal, 2(2), 121-139.
- Rousseau, D. M. (1990), "New Hire Perceptions of Their Own and Their Employer's Obligations: A Study of Psychological Contracts," *Journal of Organizational Behavior*, 11(5), 389-400.

- Rousseau, D. M. (2001), "Schema, Promise and Mutuality: The Building Blocks of the Psychological Contract," *Journal of Occupational and Organizational Psychology*, 74(4), 511-541.
- Schaubroeck, J. and Jones, J. R. (2000), "Antecedents of Workplace Emotional Labor Dimensions and Moderators of Their Effects on Physical Symptoms," *Journal of Organizational Behavior*, 21(special issue), 163-183.
- Shore, L. M. and Tetrick, L. E. (1994), "The Psychological Contract as an Explanatory Framework in the Employment Relationship," In C. L. Cooper and D. M. Rousseau (Eds.), *Trends in Organizational Behavior*, 1, 91-109.
- Siu, O. L. and Cooper, C. L. (1998), "A Study of Occupational Stress, Job Satisfaction and Quitting Intention in Hong Kong Firms: The Role of Locus of Control and Organizational Commitment," Stress Medicine, 14(1), 55-66.
- Snape, E. and Redman, T. (2003), "An Evaluation of a Three-Component Model of Occupational Commitment: Dimensionality and Consequences among United Kingdom Human Resource Management Specialists," *Journal of Applied Psychology*, 88(1), 152-159.
- Spector, P. E. (2006), "Method Variance in Organizational Research: Truth or Urban Legend?" *Organizational Research Methods*, 9(2), 221-232.
- Spector, P. E. and Jex, S. M. (1998), "Development of Four Self-Report Measures of Job Stressors and Strain: Interpersonal Conflict at Work Scale, Organizational Constraints Scale, Quantitative Workload Inventory, and Physical Symptoms Inventory," *Journal* of Occupational Health Psychology, 3(4), 356-367.
- Turner, R. J. (1981), "Social Support as a Contingency in Psychological Well-Being," Journal of Health and Social Behavior, 22(4), 357-367.
- Turnley, W. H. and Feldman, D. C. (1999), "The Impact of Psychological Contract Violations on Exit, Voice, Loyalty, and Neglect," *Human Relations*, 52(7), 895-922.
- Vandenberg, R. J. and Scarpello, V. (1994), "A Longitudinal Assessment of the Determinant Relationship between Employee Commitments to the Occupation and the Organization," *Journal of Organizational Behavior*, 15(6), 535-547.

Zhao, H., Wayne, S. J., Glibkowski, B. C. and Bravo, J. (2007), "The Impact of Psychological Contract Breach on Work-Related Outcomes: A Meta-Analysis," *Personnel Psychology*, 60(3), 647-680.