

University of Texas Rio Grande Valley

ScholarWorks @ UTRGV

Information Systems Faculty Publications and Presentations

Robert C. Vackar College of Business & Entrepreneurship

2013

The role of social support at work on job burnout

Peerayuth Charoensukmongkol

Murad Moqbel

University of Texas Rio Grande Valley, murad.moqbel@utrgv.edu

Sandra Gutierrez-Wirsching

Follow this and additional works at: https://scholarworks.utrgv.edu/is_fac



Part of the [Human Resources Management Commons](#)

Recommended Citation

Charoensukmongkol, P., Gutierrez-Wirsching, S. and Moqbel, M. (2013). The role of social support at work on job burnout. Proceedings of Decision Science Institute Forty- fourth Annual Conference, November 16 – 19, Baltimore, MD.

This Conference Proceeding is brought to you for free and open access by the Robert C. Vackar College of Business & Entrepreneurship at ScholarWorks @ UTRGV. It has been accepted for inclusion in Information Systems Faculty Publications and Presentations by an authorized administrator of ScholarWorks @ UTRGV. For more information, please contact justin.white@utrgv.edu, william.flores01@utrgv.edu.

THE ROLE OF SOCIAL SUPPORT AT WORK ON JOB BURNOUT

Peerayuth Charoensukmongkol^a, Murad Moqbel^b, Sandra Gutierrez-Wirsching^c

^a International College of NIDA, Serithai Road, Bangkok, Thailand 10240. pierremail@gmail.com

^b Our Lady of the Lake University, 411 S.W. 24th St. San Antonio, TX 78207. muradmoqbel@gmail.com

^c Texas A&M International University, 5201 University Blvd, Laredo TX 78045.

lupegut@dusty.tamtu.edu

ABSTRACT

This study investigates the role of coworker and supervisor support on three aspects of burnout: emotional exhaustion, depersonalization, and lack of personal accomplishment. In particular, the authors argue that different sources of social support at work can influence these three aspects of burnout differently. Data collected from personnel at a university in South Texas was used to test the authors' hypotheses. The results from partial least square regression show that coworker support strongly and negatively associates with emotional exhaustion and depersonalization, while supervisor support strongly and negatively associates with lack of personal accomplishment.

Keywords: job burnout, coworker support, supervisor support

INTRODUCTION

Among various factors that reduce employee motivation and productivity at work, job burnout is considered a critical concern for managers (Singh et al., 2012). In the field of managerial research, job burnout is a topic that has been extensively studied due to the negative impact it causes to employees and the organization (Cordes & Dougherty, 1993). Consequences of burnout that were documented in studies include low job satisfaction, high turnover rate and absenteeism, as well as poor service quality towards customers (Shepherd et al., 2011; Yiu et al., 2001). Studies also found that chronic experience of burnout tend increase depression and other health-related issues (Tourigny et al., 2010).

Understanding factors that make employees suffer from the burnout syndrome is essential since this can provide effective solutions to help prevent employees from experiencing this problem. In the present study, the authors focus on the role of social support at work as a key antecedent of burnout. Two aspects of social support that are in focus in this study are coworker support and supervisor support. In research, scholars suggested that these two aspects of social support are considered main predictors of job burnout (Halbesleben & Buckley, 2004). Existing studies also found that supervisor support and coworker support not only buffer negative effect of job characteristics that employees experience, but also enhance psychological wellbeing and performance of employees (Mayo et al., 2012; Sloan, 2012). For example, Blanch and Aluja (2012) found that supervisor support was negatively associated with lower burnout among Spanish workers. Sloan (2012) conducted a large scale survey of employees in a southern state of U.S. and found that coworker support decreases employees' stress from exposure to mistreatment by customers, supervisors, and others coworkers.

Even though the role of social support on job burnout has been previously investigated in research, there are several aspects that still need further investigation. First, existing studies in this area tended to combine three dimensions of burnout, namely emotional exhaustion, depersonalization, and lack of personal accomplishment, into a single measure. This combination was then used as a single outcome variable (e.g., [Blanch and Aluja \(2012\)](#)). However, scholars have argued that burnout should be viewed as a multidimensional construct ([Golembiewski, 1989](#); [Maslach & Jackson, 1981](#)). Therefore, using an aggregated measure of burnout as an outcome variable can limit our understanding about the role that social support plays on each individual dimension of burnout. Thus, by employing burnout as a multidimensional construct, the present study can determine whether coworker support and supervisor support can have a different impact on each of the three dimensions of job burnout.

In addition, even existing studies that employed burnout as multidimensional construct also reported mixed results. For example, a longitudinal study by [Sundin et al. \(2011\)](#) found that coworker support only reduced depersonalization aspect of burnout, but not emotional exhaustion and lack of personal accomplishment. Moreover, they did not find any significant relationship between supervisor support and all three aspects of job burnout. In contrast, a study by [Sochos et al. \(2012\)](#) did not find support for the positive effect of coworker support and supervisor support on any three aspect of job burnout. This study even found that coworker support strongly led to more depersonalization. Given the incongruence of these findings, there is a need for additional studies to confirm the effect that social support has on burnout.

LITERATURE REVIEW

Job burnout

Job burnout is considered a negative psychological state people experience when they are exposed to stress for a prolonged period of time. The concept of burnout has its origin from the study of [Herbert Freudenberger's \(1974\)](#). Since then, it has become an important topic that has been widely studied in various areas of occupations. Specifically, research on job burnout is heavily based on the conceptualization proposed by Maslach and colleagues who suggested that job burnout is a multidimensional construct consisting of three aspects: emotional exhaustion, depersonalization, and lack of personal accomplishment ([Maslach & Jackson, 1981](#); [Maslach & Leiter, 2008](#)). First, emotional exhaustion normally manifests in forms of fatigue and lack of energy to perform work functions. Second, depersonalization tends to happen when employees adopt dysfunctional coping strategies to deal with stress at work. Those who encounter depersonalization tend to distant themselves from their work, as well as other people at work. Third, lack of personal accomplishment usually happens when employees lack confidence to perform their work effectively.

To date, the relationship among these three aspects of burnout is still inconclusive. For example, [Maslach and Jackson \(1982\)](#) posited that emotional exhaustion is a core component of the burnout syndrome, which leads to depersonalization, and subsequently results in lack of personal accomplishment. On the other hand, [Golembiewski \(1989\)](#) argued that burnout syndrome tends

to begin with depersonalization, then result in emotional exhaustion and lack of personal accomplishment.

The role of coworker and supervisor support on job burnout

Coworkers and supervisors have a strong influence on employees' work performance. Therefore, the quality of the relationship that employees develop with their coworkers and supervisor can strongly affect the level of job burnout they experience. In particular, the contribution of social support on job burnout can be explained by the job demands-resources model (Demerouti et al., 2001). According to the model, job demands refer to any physical, psychological, social, or organizational aspects of a job that create psychological strains to employees (Demerouti et al., 2001). Examples of job demands include high volume workloads, role conflict, and unsafe working conditions. On the other hand, job resources refer to any physical, psychological, social, or organizational factors that facilitate employees to achieve their job objectives (Demerouti et al., 2001). Examples of job resources include job autonomy, flexible job schedule, and social support. The job demands-resources model postulates that job burnout tends to occur when employees lack sufficient resources to deal with demands at work. Therefore, from this perspective, coworker and supervisor support are considered important job resources that help employees deal with high demands at work.

To being with, coworkers are people who have close interaction with employees in the organization. Coworker support is defined as "the extent to which one's coworkers are helpful, can be relied upon in times of need, and are receptive to work-related problems" (Menguc & Boichuk, 2012: p.1360). Specifically, emotional support in terms of empathy and care from coworkers can significantly help employees alleviate emotional exhaustion and reduce depersonalization. Beehr et al (2000) mentioned that communication among employees about work and non-work related topics can help buffer negative feelings that employees experience at work. Furthermore, the cordial relationships that employees develop with their colleagues tend to generate trust and compassion (Halbesleben & Wheeler, 2012), which in turn, encourages them to foster the emotional and psychological wellbeing of their peers (McGuire, 2007; Sloan, 2012). Finally, employees who receive coworker support are more likely to develop a high sense of personal accomplishment through the encouragement from their coworkers.

H1: Coworker support will reduce (a) emotional exhaustion, (b) depersonalization, and (c) lack of personal accomplishment

Similarly, supervisors also have impact on the level of burnout employees experience, as studies found that supervisors tend to have an influence on attitudes and behaviors of employees (Liaw et al., 2010). More importantly, supervisors are bestowed with the discretion to allocate resources and therefore play an important role in employees' work design. Thomas and Lankau (2009) argued that support from supervisors in terms of communication and information disclosure tend to reduce role ambiguity, which subsequently helps employees experience lower job stress. In fact, the contribution of supervisor support on employee wellbeing is congruent with the leader-member exchange theory, suggesting that the quality of dyad relationship between a supervisor and a subordinate tends to predict the level of trust, fondness, and support that a subordinate receives from a supervisor (Graen & Uhl-Bien, 1995). Accordingly,

employees who receive higher support from supervisor tend to experience less burnout since they are more likely to receive better treatment from their supervisor. Furthermore, from the perspective of the social comparison theory (Festinger, 1954), the employees' perception that they receive lower support from a supervisor compared to what their peers receive can lead to stress (Buunk & Hoorens, 1992). All in all, these situations can increase all three dimensions of burnout that employee experience at work. Therefore:

H2: Supervisor support will reduce (a) emotional exhaustion, (b) depersonalization, and (c) lack of personal accomplishment

In addition to the contribution of coworker and supervisor support on three aspects of burnout stated previously, it is possible that the negative effect of coworker support on burnout can be more prominent for emotional exhaustion and depersonalization, while the negative effect of supervisor support on burnout can be more prominent for lack of personal accomplishment. The main reason for the formal prediction is that coworkers tend to have a closer and more frequent interaction with other employees than supervisors do (Halbesleben & Wheeler, 2012). Therefore, they are in a position where they can provide better emotional support to their peers. On the other hand, supervisors tend to have influence over the job aspects that employees perform and tend to evaluate employee performance (Dysvik & Kuvaas, 2012). Thus, they are in a better position to encourage employees to be more confident in their ability to achieve their job objectives. As a result, the following hypotheses are presented:

H3: The negative effect of coworker support on emotional exhaustion and depersonalization will be stronger than the negative effect on lack of personal accomplishment

H4: The negative effect of supervisor support on lack of personal accomplishment will be stronger than the negative effect on emotional exhaustion and depersonalization

METHOD

Participants and procedure

For the purpose of this study, the sample consisted of personnel from a public university in South Texas. The authors deployed the self-report questionnaire survey to collect the data. A total of 131 questionnaires along with cover letters were delivered to supervisors of each campus departments asking them to encourage their employees to complete the survey. After a few weeks later, the authors received 78 completely filled surveys back. This amount accounts to 60 percent response rate.

Measures

The measure of job burnout was adopted from the Maslach Burnout Inventory (MBI) General survey (Maslach et al., 1996). The scale consists of sixteen items: five items belong to emotional exhaustion (e.g., "I feel emotionally drained from my work"; "I feel used up at the end of the workday"); five items belong to depersonalization (e.g., "I doubt that significance of my work";

“*I just want to do my job and not be bothered*”); and six items belong to lack of personal accomplishment (e.g., “*I can effectively solve the problems that arise in my work*”; “*I have accomplished many worthwhile things in my current job*”). All items were scored on a five-point rating scale, ranging from 1 (never) to 5 (always).

Supervisor support was measured with the scale developed by Eisenberger et al. (1986). The scale consists of four items. Sample items include “*My work supervisor really cares about my wellbeing*” and “*My supervisor strongly considers my goals and value*”. Coworker support was measured with the scale developed by Tang (1998). The scale consists of eight items. Sample items include “*My coworkers are very helpful when I encounter difficulties with my work*” and “*When I encounter a problem, I usually seek help from my coworkers*”. These measures were scored on a five-point rating scale, ranging from 1 (never) to 5 (always).

In addition to the main independent variables, a set of control variables that can affect job burnout were included into the model. These variables include job demands, ages, genders, education, and job tenure. The scale of *job demands* was based on the Job Content Questionnaire survey developed by Karasek et al. (1998). It was measured in terms of quantitative workload (e.g., *work hard, conflicting job demands*). The scale contains five items. Items were scored on a four-point frequency scale, ranging from 1 (strongly agree) to 5 (strongly disagree). Age was measured in years. Gender was measured as a dummy variable where females were coded 0 and males 1. Education ranged from 1 (less than a bachelor’s degree), 2 (bachelor’s degree), 3 (master’s degree), to 4 (doctoral degree). Job tenure was measured in the number of years that respondents had worked for their organizations. Job position ranged from 1 (junior staff), 2 (senior staff), 3 (junior manager), 4 (middle-level manager), and 5 (senior-level manager).

Estimating technique

This study uses partial least square (PLS) regression as a statistical technique to analyze the data. The major advantages that PLS have over covariance-based structure equation modeling are the following: (1) it does not require data to be normally distributed, and (2) it requires smaller sample size for the analysis. PLS regression analysis was performed using WarpPLS 3.0 (Kock, 2012).

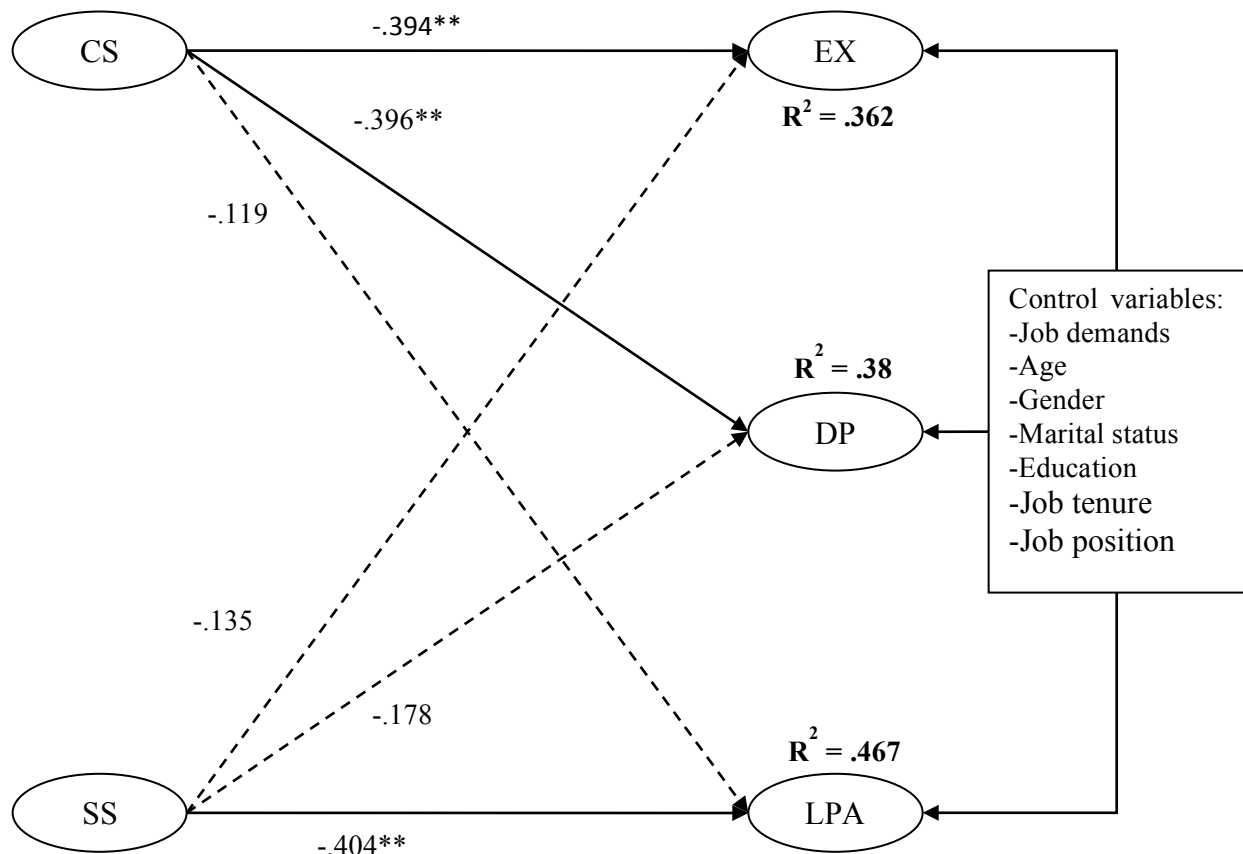
RESULTS

Before estimating the PLS model, a series of analyses were performed. Construct reliabilities were evaluated using Cronbach alphas (α). All values exceeded the widely recommended minimum value of 0.7 (Fornell & Larcker, 1981). Convergent validity of latent variables was evaluated using factor loadings. The results indicated that all factors loadings were greater than 0.5, which are sufficient as recommended by Hair et al (2009). Next, the test for discriminant validity was performed using average variance extracted (AVE). As suggested by Fornell and Larcker (1981), the square root of the AVE of each construct must be greater than other correlations involving that construct in order for discriminant validity to exist. The results were also satisfactory. Table 1 reported correlations among variables, as well as reliability and discriminant validity indicators of latent variables (see appendix). Finally, the test for the

possible presence of multicollinearity among the indicators was also performed using Variance Inflation Factor (VIF) statistics. The VIFs ranged from 1.43 to 3.18, which is considerably below the critical value of 3.3 as suggested by [Petter et al \(2007\)](#).

Results from PLS analysis that included all control variables were presented in Figure 1. The standardized coefficient and t-values were calculated using a bootstrap resampling procedure with 100 subsamples ([Efron et al., 2004](#)).

FIGURE 1: PLS RESULTS



Notes: * $p < .1$; ** $p < .05$; *** $p < .01$.
 Standardized coefficients are reported
 Solid lines represent significant paths

For the association between coworker support and three aspects of burnout, the results showed that coworker support is negatively associated with emotional exhaustion ($\beta = -.394$; $p < .05$),

depersonalization ($\beta=-.396$; $p<.05$), and lack of personal accomplishment ($-.119$; $p=.254$). However, the association was not statistically significant for lack of personal accomplishment. Therefore, hypothesis 1a and hypothesis 1b were supported while hypothesis 1c was not supported.

For the association between supervisor support and three aspects of burnout, the results showed that supervisor support is negatively associated with emotional exhaustion ($\beta=-.135$; $p=.195$), depersonalization ($\beta=-.178$; $p=.203$), and lack of personal accomplishment ($-.404$; $p<.05$). However, only the association with lack of personal accomplishment was statistically significant. Therefore, hypothesis 2c was supported while hypothesis 2a and hypothesis 2b were not supported.

Next, by comparing the magnitude of the path coefficient and the significant level between coworker support and supervisor support on three aspects of burnout, the results suggested that the contributions of coworker support on emotional exhaustion and depersonalization were stronger than the contributions of supervisor support on those two aspects of burnout. On the other hand, the contribution of supervisor support on lack of personal accomplishment was stronger than the contribution of coworker support on that aspect. Therefore, hypothesis 4 and hypothesis 5 were supported.

Finally, the significant effects of control variables on three aspect of burnout were found as the following: emotional exhaustion was negative associated with education ($\beta=-.155$; $p<.1$); depersonalization was positively associated with gender (male) ($\beta=.173$; $p<.1$); lack of personal accomplishment was negatively associated with job demands ($\beta=-.288$; $p<.05$) and job tenure ($\beta=-.363$; $p<.05$) but positively associated with age ($\beta=.393$; $p<.05$).

DISCUSSION

General discussion

This study aimed to test the role of coworker and supervisor support on three aspects of burnout. The results from PLS analysis appeared to support our prior predictions. We found that both coworker and supervisor support tended to make employees experience lower burnout. Generally, the results from this study are consistent with existing literature which regards social support as a solution to help employees deal effectively with stress at work (Halbesleben & Buckley, 2004; Sochos et al., 2012). However, we also found that the degree of support that employees perceived from different sources in an organization tended to help reduce different types of burnout. Specifically, our findings suggested that support from coworkers significantly made employees experience lower emotional exhaustion and depersonalization, while support from supervisor significantly helped employees to be more confident in their ability to achieve their job objectives of personal accomplishment. These findings support our predictions that: (1) managers have strong influence on job advancement of employees; thus, lack of support from managers can cause employees to feel demotivated to achieve high job performance; and (2) coworkers have close interpersonal relationship with employees; thus, lack of coworker support

can cause employees to feel alienated and become demotivated to come to work. Overall, these findings provide important contribution to existing research by providing this evidence.

Limitations

Despite interesting findings that the present research provided, this study has some limitations that need to be discussed. Specifically, we used a small sample from only one university in south Texas. In addition, the majority of the participants are Hispanic. Therefore, these sampling issues can limit the generalizability of our findings.

Practical implications

Finally, there are managerial implications based on our findings. Due to detrimental consequences that burnout causes to productivity and performance of employees, it is crucial for organizations to implement proper policies in order to prevent employees from experiencing burnout. In particular, organizations need to make sure that employees receive sufficient support from their coworkers and supervisors. For example, job designs that require teamwork as well as compensation system that is based on team performance could allow employees to collaborate more with one another (Bamberger & Levi, 2009), thereby encouraging them to develop close interpersonal relationship. In the same manner, it is necessary for managers to provide adequate support to their employees to help them develop high confidence. For example, leadership techniques such as management coaching can be implemented to help employees enhance their self-efficacy (Baron & Morin, 2010), thus helping in developing confidence about their job performance.

REFERENCES

- Bamberger, P. A., & Levi, R. (2009). Team-based reward allocation structures and the helping behaviors of outcome-interdependent team members. *Journal of Managerial Psychology*, 24(4), 300-327.
- Baron, L., & Morin, L. (2010). The impact of executive coaching on self-efficacy related to management soft-skills. & *Organization Development Journal*, 31(1), 18-38.
- Beehr, T. A., Jex, S. M., Stacy, B. A., & Murray, M. A. (2000). Work stressors and coworker support as predictors of individual strain and job performance. *Journal of Organizational Behavior*, 21(4), 391-405. doi: 10.1002/(sici)1099-1379(200006)21:4<391::aid-job15>3.0.co;2-9
- Blanch, A., & Aluja, A. (2012). Social support (family and supervisor), work–family conflict, and burnout: Sex differences. *Human Relations*, 65(7), 811-833. doi: 10.1177/0018726712440471

- Buunk, B. P., & Hoorens, V. (1992). Social support and stress: The role of social comparison and social exchange processes. *British Journal of Clinical Psychology, 31*(4), 445-457. doi: 10.1111/j.2044-8260.1992.tb01018.x
- Cordes, C. L., & Dougherty, T. W. (1993). A Review and an Integration of Research on Job Burnout. *Academy of Management Review, 18*(4), 621–656.
- 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.
- Dysvik, A., & Kuvaas, B. (2012). Perceived supervisor support climate, perceived investment in employee development climate, and business-unit performance. *Human Resource Management, 51*(5), 651-664. doi: 10.1002/hrm.21494
- Efron, B., Rogosa, D., & Tibshirani, R. (2004). Resampling methods of estimation. In N. J. Smelser & P. B. Baltes (Eds.), *International Encyclopedia of the Social & Behavioral Sciences* (pp. 13216-13220). New York, NY: Elsevier.
- Eisenberger, R., Huntington, R., Hutchinson, S., & Sowa, D. (1986). Perceived organizational support. *Journal of Applied Psychology, 71: 3, , 71*(3), 500–507.
- Festinger, L. (1954). A theory of social comparison processes. *Human relations, 7*(2), 117-140. doi: 10.1177/001872675400700202
- Fornell, C., & Larcker, D. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research, 18*(1), 39–50.
- Freudenberger, H. J. (1974). Staff Burnout. *Journal of Social Issues, 30*(1), 159–165.
- Golembiewski, R. T. (1989). A Note on Leiter's Study: Highlighting Two Models of Burnout. *Group & Organization Management, 14*(1), 5-13.
- Graen, G. B., & Uhl-Bien, M. (1995). Relationship-based approach to leadership: Development of leader–member exchange (LMX) theory of leadership over 25 years. Applying a multi-level multi-domain perspective. *Leadership Quarterly, 6*(2), 219-247. doi: 10.1016/1048-9843(95)90036-5
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2009). *Multivariate data analysis* (7th ed.). Upper Saddle River, NJ: Prentice Hall.
- Halbesleben, J. R. B., & Buckley, M. R. (2004). Burnout in Organizational Life. *Journal of Management, 30*(6), 859–879.
- Halbesleben, J. R. B., & Wheeler, A. R. (2012). To Invest or Not? The Role of Coworker Support and Trust in Daily Reciprocal Gain Spirals of Helping Behavior. *Journal of Management*. doi: 10.1177/0149206312455246

- Karasek, R., Brisson, C., Kawakami, N., Houtman, I., Bongers, P., & Amick, B. (1998). The Job Content Questionnaire (JCQ): An Instrument for Internationally Comparative Assessments of Psychosocial Job Characteristics. *Journal of Occupational Health Psychology, 3*(4), 322-355.
- Kock, N. (2012). *WarpPLS 3.0 User Manual*. Laredo, TX: ScriptWarp Systems.
- Liaw, Y.-J., Chi, N.-W., & Chuang, A. (2010). Examining the Mechanisms Linking Transformational Leadership, Employee Customer Orientation, and Service Performance: The Mediating Roles of Perceived Supervisor and Coworker Support. *Journal of Business and Psychology, 25*(3), 477-492. doi: 10.1007/s10869-009-9145-x
- Maslach, C., & Jackson, S. E. (1981). The measurement of experienced burnout. *Journal of Organizational Behavior, 2*(2), 99-113. doi: 10.1002/job.4030020205
- Maslach, C., & Jackson, S. E. (1982). Burnout in Health Professions: A Social Psychological Analysis. In G. S. Sanders & J. Suls (Eds.), *Social Psychology of Health and Illness* (pp. 227–251). Hillsdale, N.J.: Lawrence Erlbaum.
- Maslach, C., Jackson, S. E., & Leiter, M. P. (1996). *Maslach burnout inventory manual* (3rd ed.). Palo Alto, CA: Consulting Psychologists Press.
- Maslach, C., & Leiter, M. P. (2008). Early Predictors of Job Burnout and Engagement. *Journal of Applied Psychology, 93*(3), 498-512.
- Mayo, M., Sanchez, J. I., Pastor, J. C., & Rodriguez, A. (2012). Supervisor and coworker support: a source congruence approach to buffering role conflict and physical stressors. *International Journal of Human Resource Management, 23*(18), 3872-3889. doi: 10.1080/09585192.2012.676930
- McGuire, G. M. (2007). Intimate Work: A Typology of the Social Support That Workers Provide to Their Network Members. *Work and Occupations, 34*(2), 125-147. doi: 10.1177/0730888406297313
- Menguc, B., & Boichuk, J. P. (2012). Customer orientation dissimilarity, sales unit identification, and customer-directed extra-role behaviors: Understanding the contingency role of coworker support. *Journal of Business Research, 65*(9), 1357-1363. doi: <http://dx.doi.org/10.1016/j.jbusres.2011.09.023>
- Petter, S., Straub, D., & Rai, A. (2007). Specifying Formative Constructs in Information Systems Research. *MIS Quarterly, 31*(4), 623–656.
- Shepherd, C. D., Tashchian, A., & Ridnour, R. E. (2011). An Investigation of the Job Burnout Syndrome in Personal Selling. *Journal of Personal Selling & Sales Management, 31*(4), 397-410.

- Singh, P., Suar, D., & Leiter, M. P. (2012). Antecedents, Work-Related Consequences, and Buffers of Job Burnout Among Indian Software Developers. *Journal of Leadership & Organizational Studies, 19*(1), 83-104. doi: 10.1177/1548051811429572
- Sloan, M. M. (2012). Unfair Treatment in the Workplace and Worker Well-Being: The Role of Coworker Support in a Service Work Environment. *Work and Occupations, 39*(1), 3-34. doi: 10.1177/0730888411406555
- Sochos, A., Bowers, A., & Kinman, G. (2012). Work Stressors, Social Support, and Burnout in Junior Doctors: Exploring Direct and Indirect Pathways. *Journal of Employment Counseling, 49*(2), 62-73. doi: 10.1002/j.2161-1920.2012.00007.x
- Sundin, L., Hochwalder, J., & Lisspers, J. (2011). A longitudinal examination of generic and occupational specific job demands, and work-related social support associated with burnout among nurses in Sweden. *Work, 38*(4), 389-400. doi: 10.3233/wor-2011-1142
- Tang, H. K. (1998). An inventory of organizational innovativeness. *Technovation, 19*(1), 41-51. doi: 10.1016/s0166-4972(98)00077-7
- Thomas, C. H., & Lankau, M. J. (2009). Preventing burnout: the effects of LMX and mentoring on socialization, role stress, and burnout. *Human Resource Management, 48*(3), 417-432.
- Tourigny, L., Baba, V. V., & Xiaoyun, W. (2010). Burnout and depression among nurses in Japan and China: the moderating effects of job satisfaction and absence. *International Journal of Human Resource Management, 21*(15), 2741-2761. doi: 10.1080/09585192.2010.528656
- Yiu, C., Au, W. T., & Tang, C. S.-k. (2001). Burnout and duration of service among Chinese voluntary workers. *Asian Journal of Social Psychology, 4*(2), 103-111. doi: 10.1111/j.1467-839X.2001.00079.x

APPENDIX

Table 1: Correlations among variables, internal consistency, and convergent validity

	α	EX	DP	LPA	CS	SS	JDM	AGE	GEN	EDU	MS	JT	JP
EX	.918	(0.87)											
DP	.881	0.612**	(0.82)										
LPA	.867	-0.162	-0.536**	(0.78)									
CS	.894	-0.527**	-0.545**	0.349**	(0.76)								
SS	.848	-0.4**	-0.453**	0.498**	0.671**	(0.84)							
JDM	.779	0.34*	0.027	0.228	-0.284*	-0.141	(0.73)						
AGE	-	0.215	0.184	-0.071	-0.151	-0.088	0.142	-					
GEN	-	0.046	0.302**	-0.258*	-0.224**	-0.001	-0.19	0.049	-				
EDU	-	-0.015	0.158	-0.12	-0.183	-0.11	-0.127	0.344**	0.215	-			
MS	-	0.101	0.015	0.156	-0.022	0.037	0.067	0.563**	-0.038	0.378**	-		
JT	-	0.206	0.003	0.242*	-0.086	0.055	0.175	0.696**	-0.153	0.157	0.52**	-	
JP	-	0.068	-0.026	0.129	0.06	0.101	0.131	0.393**	-0.002	0.276*	0.394**	0.409**	-

Notes: * $p < .05$; ** $p < .01$.

Average variance extracted of latent variables are shown in the parentheses

EX=emotional exhaustion; DP=depersonalization; LPA=lack of personal accomplishment; CS=coworker support; SS=supervisor support;

JDM=job demands; AGE=age; GEN=gender; EDU=education; MS=marital status; JT=job tenure; JP=job position