

Moderating effects of leader-member exchange (LMX) on job burnout in dietitians and chefs of institutional foodservice

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Abstract

The objectives of the study were to investigate job burnout and leader-member exchange (LMX) levels as well as to evaluate buffering effects of LMX on burnout among dietitians and chefs at institutional foodservices. Hypotheses were proposed based on the Job Demands-Resources model and LMX theory. The study population consisted of dietitians and chefs who were in charge of managing unit operations in a nationwide contract management company. Positive/negative affectivity, workload, job burnout, and LMX scales that had been validated in previous research were adopted. A total of 552 questionnaires were distributed and 154 responses were returned. Results indicated that respondents' burnout levels were moderate and emotional exhaustion was greater than cynicism. In terms of LMX, the surveyed dietitians and chefs showed higher respect toward their supervisors than loyalty. When positive affectivity and negative affectivity were controlled, workload influenced emotional exhaustion and professional efficacy significantly. With affectivity and workload controlled, however, LMX did not influence any dimensions of burnout. The moderating effect of LMX on the relationship between workload and cynicism was significant. That is, the effect of workload on cynicism was weak if the dietitians and chefs perceived the relationship with their supervisor positively. Based on the findings and literature reviewed, how to mitigate job burnout among foodservice managers is discussed.

Key Words: Job burnout, LMX (leader-member exchange), workload, dietitians, chefs

Introduction

Stress, "an adoptive response to a situation that is perceived as challenging and threatening to a person's well-being", is a ubiquitous phenomenon at work places today [1,2]. One job stress-related response that has received considerable attention from both practitioners and researchers is burnout. Burnout is defined as "a syndrome of emotional exhaustion and cynicism that occurs frequently among individuals who do 'people-work' of some kind" [3]. Persons experiencing burnout show low energy and motivation, negative and callous feelings about themselves or their work, and distance from interpersonal interactions [3,4]. Eventually job burnout creates negative outcomes in organizations such as reduced productivity, job satisfaction, and organizational commitment as well as increased absenteeism and turnover [4,5].

As burnout is considered a pervasive occupational hazard in many industries, researchers have investigated the prevalence, causes, and consequences of job burnout in various work settings including foodservice operations. The literature findings suggest that service professionals are likely to burnout due to a high degree of interaction with clients and changing work environment, and reveal that the professions that demonstrate high burnout also report high turnover [6,7]. Korean foodservice employees'

job stress was reported to be very strongly associated with turnover intention [7].

The hospitality industry is notorious for unfavorable job characteristics and working conditions such as long and unsociable working hours, high emotional labor, hot and loud workplaces, and time pressure, which all contribute to burnout [8,9]. In the foodservice industry, turnover rates are known to be higher than in the overall private sector. The turnover rate of middle managers was also significantly higher in the hospitality industry than in other service sector industries [10,11].

The Korean foodservice industry has grown continuously during past decades, and the market size of the institutional foodservice industry was estimated as approximately 600 billion won in 2006 [12]. Among the institutional foodservice industry, contract management companies share more than half of the market and that proportion continues to grow. To obtain a competitive edge in the market, foodservice corporations have invested significant time and money on hiring and maintaining qualified staff. In institutional foodservice operations, dietitians and chefs as front-line managers, who usually take managerial roles, are more likely to experience stress and be easily burned out since they have to meet the needs of customers and organizations at the same time, which may conflict each other.

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Consequently it is clear that in order to maintain qualified middle managers, foodservice corporations should pay attention to managing job burnout in dietitians and chefs.

Every occupation has its own specific characteristics related to burnout, which are classified into two groups - job demands and job resources [13]. Job demands refer to “characteristics associated with the task or working environment that require workers to exert physical or mental efforts [14].” Examples are high work pressure, role overload, emotional demands, and poor environmental conditions. Job resources refer to “aspects of a job that facilitate accomplishing goals, decrease the demands of the job, or enhance personal growth [14].” Resources include support from colleagues, supervisory coaching and support, participation in decision-making, rewards, and advancement opportunities [15]. In general, job demands and resources are negatively related and high job resources reduce job demands [16]. The relationship between job resources and demands is known as the Job Demands-Resources (JD-R) model. Using the JD-R model, Bakker *et al.* [13,16] contended that the impact of job demands on burnout is strong when employees do not have enough resources. Kang *et al.* [8], Humborstad *et al.* [17], and Tabacchi *et al.* [18] also reported that service employee burnout was mitigated by higher perceived organizational support.

One critique of the burnout literature is that it has largely neglected the study of how leadership processes affect burnout [14]. Early leadership theories assume that leaders engage in a single leadership style with all subordinates. However, researchers have conceptualized leadership in workplaces as a social influence process and proposed Leader-Member Exchange (LMX) theory, suggesting that leaders do not use the same style in dealing with all subordinates, but rather develop a different type of relationship or exchange with each subordinate [19]. Research on LMX has shown significant associations with many important work outcomes. For example, LMX is negatively related to turnover and turnover intentions, and positively related to organizational commitment, satisfaction with supervision, supervisory ratings of job performance, autonomy, satisfaction with work, and frequency of promotions [19].

Bakker *et al.* [16] stated that various job demands and resources play a role in a certain organization depending upon the specific job characteristics. Today most research on burnout conducted in Korea has focused on assessing the prevalence of burnout and examining the effects of demographic and organizational characteristics on job burnout. Few research studies have focused on how to manage job burnout among employees from the viewpoint of organizations, and no research studies have tried to explore the effects of supervisor-subordinate relationships on managing burnout among middle managers in the foodservice industry.

The objectives of the study were to assess levels of job stress and perceptions of LMX, and to evaluate moderating effects of LMX on burnout in dietitians and chefs at institutional foodservices. Based on a literature review, the following hypotheses were proposed (Fig. 1).

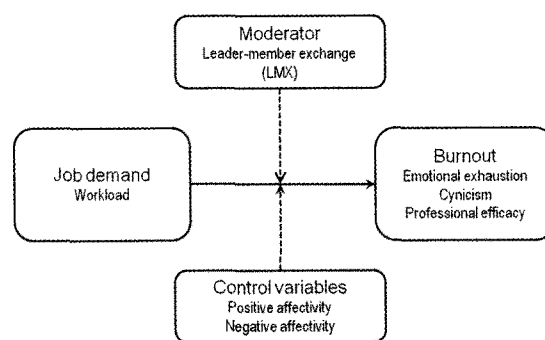


Fig 1. Study Model

Hypothesis 1: Workload has positive effects on job burnout among foodservice managers.

- H 1-1: Workload has a positive effect on the emotional exhaustion dimension of job burnout among foodservice managers.
- H 1-2: Workload has a positive effect on the cynicism dimension of job burnout among foodservice managers.
- H 1-3: Workload has a negative effect on the professional efficacy dimension of job burnout among foodservice managers.

Hypothesis 2: The quality of relationships between foodservice managers and their supervisors has a negative effect on job burnout.

- H 2-1: LMX has a negative effect on emotional exhaustion among foodservice managers.
- H 2-2: LMX has a negative effect on cynicism among foodservice managers.
- H 2-3: LMX has a positive effect on professional efficacy among foodservice managers.

Hypothesis 3: The positive effects of workload on job burnout are moderated by the quality of relationships between foodservice managers and their supervisors.

- H 3-1: The positive effect of workload on the emotional exhaustion dimension of burnout is moderated by LMX among foodservice managers.
- H 3-2: The positive effect of workload on the cynicism dimension of burnout is moderated by LMX among foodservice managers.
- H 3-3: The positive effect of workload on the professional efficacy dimension of burnout is moderated by LMX among foodservice managers.

Subjects and Methods

Sample and procedure

The research population of this study included dietitians and chefs employed by a contract foodservice management company in Korea. A human resource (HR) director of the company was

explained the purpose of the study and asked to cooperate in the research. The HR director provided the researcher with a list of operations that the company managed with contracts. Packets containing a cover letter explaining the study purpose and the contact information of the researcher, questionnaires accompanied with small envelopes, and a postage-paid return envelope were mailed to unit managers. The unit managers distributed the questionnaires and small envelopes to dietitians and chefs in their units and returned completed questionnaires to the researcher.

After mailing questionnaires to the unit managers, the HR director sent all unit managers an e-mail message to encourage participation. A total of 552 questionnaires were distributed and 154 responses were returned, which resulted in a response rate of 27.9%. Excluding questionnaires with significant missing data, 151 responses were used for analysis.

Instrument

A questionnaire was developed based on the review of literature. As control variables, positive affectivity (PA) and negative affectivity (NA) were measured using a 20 item-scale validated for Korean settings [20]. Coefficient alphas for the positive affectivity and negative affectivity were 0.87 and 0.91, respectively. Workload was measured using five items adopted from Spector and Jex's scale [21]. The coefficient alpha reliability estimate of the workload was 0.88. A seven-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree) was used for the affectivity and workload measurements.

Job burnout was assessed with the Maslach Burnout Inventory-General Service of 16 items [22]. The scale consisted of three subscales: exhaustion (five items), cynicism (five items), and professional efficacy (six items). The items were measured using a seven-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree) and their internal consistencies were 0.87, 0.68, and 0.85, respectively.

The LMX scale developed by Liden and Maslyn [23] was used to measure the quality of exchanges between participants and their supervisors. The scale consisted of 12 items for four dimensions: affect (three items), loyalty (three items), contribution (three items), and professional respect (three items). A seven-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree) was used. Finally, brief information was obtained about the respondents.

Statistical analysis

Descriptive statistics were calculated for the study constructs. A series of hierarchical regression analyses were conducted to examine the effects of workload and LMX on the burnout dimensions, and the moderating effect of LMX on the burnout dimensions. The analyses were performed with PASW Win (18.0).

Results

Respondent profile

The characteristics of the respondents are shown in Table 1. Fifty-eight percent of the respondents were chefs and most of the chefs were males (88.2%). The majority of the responding dietitians were female (98.4%). The average age of the respondents was 30.3 years, with a range of 22-62. They had been employed in the company for an average of 40 months with a range of 3-139 months. Eighty-six percent of the respondents had college or graduate degrees.

Table 2 represents the summary statistics of the study

Table 1. Descriptive characteristics of respondents

Variables	Frequency	Percentage
Job type		
Chef	87	57.6
Dietitian	64	42.4
Gender		
Male	76	51.0
Female	73	49.0
Educational background		
High schools or less	21	14.2
College/university	122	82.4
Graduate schools	5	3.4
Age		
25 years or younger	26	18.7
26-30 years	64	46.0
31-35 years	29	20.9
31-40 years	8	5.8
41 years or older	12	8.6
Tenure at the company		
24 months or less	38	26.2
25-36 months	35	25.2
37-48 months	36	25.9
49 months or longer	36	25.9

Table 2. Descriptive statistics of the study constructs

	Items	Mean \pm SD	Cronbach's α
Positive affectivity	10	4.60 \pm 0.86	0.87
Negative affectivity	10	3.54 \pm 0.82	0.81
Workload	5	4.95 \pm 1.04	0.88
Interpersonal conflict	4	2.79 \pm 1.08	0.78
Job burnout			
Exhaustion	5	4.37 \pm 1.18	0.87
Cynicism	5	3.89 \pm 0.88	0.68
Professional efficacy	6	4.99 \pm 0.84	0.85
LMX			
Affect	3	4.22 \pm 1.10	0.78
Loyalty	3	4.07 \pm 1.16	0.89
Contribution	3	4.33 \pm 1.05	0.82
Professional respect	3	4.71 \pm 1.18	0.92

A 7-point Likert scale was used ranging from 1 (strongly disagree) to 7 (strongly agree).

constructs. The reliability of the study constructs was relatively high since Cronbach's alphas of the constructs ranged from 0.68 to 0.92. PA and NA were measured since they could be confounding factors for estimating job burnout. PA (4.6 points) was rated higher than NA (3.5 points). Workload, which was measured as a job demand factor, averaged 5.0 based on a seven-point scale.

Among the job burnout dimensions, exhaustion (4.4 points) was rated higher than cynicism (3.9 points). The professional efficacy (5.0) perceived by the respondents was high. The four dimensions of the LMX scored 4.2, 4.1, 4.3, and 4.7, respectively. The dietitians and chefs in the foodservice company showed higher respect toward their supervisors than loyalty.

Correlation among the study constructs

Results of the correlation analysis are summarized in Table 3. As expected, PA and NA showed opposite directions in correlations with other constructs. PA was positively correlated with workload, professional efficacy, and the four dimensions of LMX, and negatively correlated with exhaustion and cynicism. The negative correlations between PA and exhaustion and cynicism were insignificant. NA was positively correlated with workload, exhaustion, and cynicism and negatively correlated with affect.

Workload perception had significantly positive correlations with professional efficacy ($P < 0.01$). The correlations between

workload and the dimensions of LMX were positive but insignificant. The exhaustion and cynicism dimensions of burnout were negatively correlated with affect and professional respect. The professional efficacy dimension was positively correlated with affect ($P < 0.01$), contribution ($P < 0.05$), and professional respect ($P < 0.01$).

Moderating effects of LMX on the relationship between job demand and burnout

To assess the moderating effects of LMX on the relationship between workload and job burnout dimensions, a series of hierarchical regression analyses were performed (Table 4). To control the effects of affectivity on the dependent variable, burnout, PA and NA were entered in the first step. In the second step, workload, which was selected as a work demand in this study, was entered. In the third step, a moderating factor, LMX, was entered, and finally, an interaction term of workload and LMX was entered in step 4.

In regression on the exhaustion dimension of burnout, PA and NA were significant predictors of exhaustion (adjusted $R^2 = 0.26$, $P < 0.001$). When workload was entered into the model, the model was significant (adjusted $R^2 = 0.34$, $P < 0.001$); workload increased emotional exhaustion significantly ($P < 0.01$) when PA and NA were controlled. Thus Hypothesis 1-1 was supported. The addition of the moderating variable, LMX, to the model, however, did not increase the explanatory power of the model

Table 3. Intercorrelations of measures

	2	3	4	5	6	7	8	9	10
1. Positive affectivity	0.102	0.373**	-0.149	-0.253	0.473**	0.471**	0.244**	0.386**	0.478**
2. Negative affectivity	-	0.290**	0.486**	0.276**	-0.050	-0.174*	-0.069	0.120	-0.097
3. Workload		-	0.342	-0.013	0.307**	0.087	0.071	0.160	0.120
4. Exhaustion			-	0.477**	-0.079	-0.272**	-0.109	0.001	-0.211**
5. Cynicism				-	-0.101	-0.331*	-0.123	-0.206	-0.396**
6. Professional efficacy					-	0.223**	0.100	0.189*	0.224**
7. Affect							0.591**	0.426**	0.651**
8. Loyalty								0.291**	0.488**
9. Contribution									0.495**
10. Professional respect									

* $P < 0.05$, ** $P < 0.01$, *** $P < 0.001$

Table 4. Effects of workload and LMX on job burnout dimensions

Independent variables	Exhaustion				Cynicism				Professional efficacy			
	Step 1	Step 2	Step 3	Step 4	Step 1	Step 2	Step 3	Step 4	Step 1	Step 2	Step 3	Step 4
Positive affectivity	-0.20*	-0.31***	-0.26**	-0.26**	-0.31***	-0.30**	-0.17	-0.16	0.49***	0.42***	0.44***	0.44***
Negative affectivity	0.51***	0.42***	0.41***	0.41***	0.28**	0.28**	0.25**	0.23**	-0.06	-0.11	0.44	-0.11
Workload(WL)		0.33**	0.33**	0.33		-0.02	-0.02	0.74		0.21*	0.21*	0.10
LMX			-0.10	-0.09			-0.25	0.62			-0.04	-0.16
WL*LMX				-0.01				-2.83**				0.18
R ²	0.27	0.36	0.36	0.36	0.15	0.15	0.20	0.25	0.24	0.28	0.28	0.28
R ² Adjusted	0.26	0.34	0.34	0.34	0.14	0.13	0.17	0.22	0.23	0.26	0.25	0.25
P value	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001

* $P < 0.05$, ** $P < 0.01$, *** $P < 0.001$

(adjusted $R^2 = 0.34$). LMX was not a significant predictor of emotional exhaustion when PA, NA, and workload were controlled. Therefore Hypothesis 2-1 was not supported. The interaction between workload and LMX on exhaustion was insignificant in step 4. That is, the quality of the relationships between dietitians and chefs and their supervisors did not moderate the effect of workload on emotional exhaustion. Hypothesis 3-1 was not supported.

In the second hierarchical regression model, PA and NA were controlled in the first step (adjusted $R^2 = 0.14$, $P < 0.001$). Workload (Step 2) and LMX (Step 3) did not improve the explanatory power of the model and did not increase cynicism significantly. Therefore, Hypotheses 1-2 and 2-2 were rejected. When the interaction between workload and LMX was entered in step 4, explanatory power improved (adjusted $R^2 = 0.22$, $P < 0.001$), and the interaction was significant ($\beta = -2.83$, $P < 0.01$). Thus hypothesis 3-2 was supported. That is, when LMX between the dietitians and chefs and their supervisors was great, the effect of workload on cynicism decreased. The interaction effect of LMX and workload is presented graphically in Fig 2. It is assumed that foodservice managers who perceive their relationship with their supervisor favorably feel less cynicism, compared with those who perceive the relationship with their supervisor less favorably when their workload increases.

In regression on the professional efficacy dimension of burnout, PA was a significant predictor (adjusted $R^2 = 0.23$, $P < 0.001$). The model where workload was entered was significant (adjusted $R^2 = 0.28$, $P < 0.001$); workload increased professional efficacy significantly ($\beta = 0.21$, $P < 0.05$) when PA and NA were controlled. Since a negative effect was expected, Hypothesis 1-3 was rejected. The explanatory power of the model where the moderating variable, LMX, was entered was significant (adjusted $R^2 = 0.28$, $P < 0.001$), but LMX was insignificant. Hypothesis 2-3 was not supported.

The interaction term of workload and LMX was also insignificant in step 4. Therefore Hypothesis 3-3 was rejected. That is, the quality of the relationship between foodservice managers and their supervisor did not moderate the effect of workload on professional efficacy.

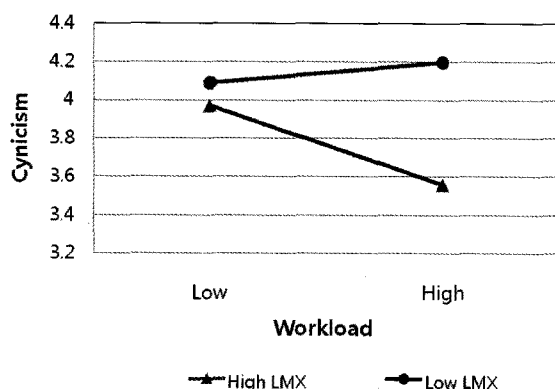


Fig 2. Graphical presentation of interaction between workload and LMX

Discussion

Job stress and burnout in the hospitality industry has been a concern of both practitioners and researchers in recent decades [6,10,18,24-27]. Burnout and its consequences cost employees and organizations. Previously, job burnout was closely related to turnover intentions of dietitians and chefs in a contract management company and in school foodservices [5,28]. In particular, the turnover of front line managers is more serious since it results in discontinuation of management and quality problems [6]. Therefore, to maintain qualified foodservice managers, foodservice corporations should be interested in managing job burnout [5]. The present study tried to assess the effects of workload and LMX on job burnout, and to investigate the buffering effects of LMX on the relationship between workload and job burnout. Three hypotheses were developed based on the JD-R model and related literature [16,19,29-31].

PA and NA, described as "the disposition to perceive events and individuals in a generally positive and enthusiastic or negative manner," are known to be related to perceptions of job stressors [32]. When measured on a seven-point scale, PA was rated higher than NA among the surveyed dietitians and chefs. PA was positively correlated with professional efficacy whereas NA was positively correlated with emotional exhaustion and depersonalization (corresponding to cynicism in the study) and PA showed a reverse pattern. Researchers thought that one high in NA tended to show a spuriously inflated stressor-burnout relationship and have controlled NA, in particular, in investigating burnout [5,33,34]. Therefore, PA and NA were controlled, before investigating the effects of the study constructs, workload and LMX, on burnout.

Even though practitioners' interest seems high, to date limited research has been conducted on employees' burnout in institutional foodservice. The responding dietitians and chefs perceived themselves to have moderate levels of emotional exhaustion and cynicism. These results are consistent with the previous literature. In hospital and welfare foodservice settings, Korean dietitians' burnout was similar to the findings of this study, and emotional exhaustion was higher than cynicism [35,36]. Dietetic technicians in the U.S. and certified chef members of the American Culinary Federation showed similar levels of burnout [8,37]. In a study with middle managers in the U.S. hotel industry, 40% and 28% of the responding middle managers scored high on emotional exhaustion and depersonalization, respectively [6].

A review of burnout literature in the hospitality industry revealed that most studies have focused on assessing burnout levels and on comparing burnout by general characteristics of respondents and organizations. The burnout of dietetic technicians was not significantly different by working experiences [37]. Age, educational background, and location of operation did not influence dietitians' burnout in welfare foodservices [36].

However, Buick and Thomas [6] identified the profile of a manager who is most likely to experience burnout as relatively young, single or divorced, female, relatively new to managerial responsibilities and working in food production, front offices, or food and beverage service departments. They also stated that the high incidence of burnout among women should gain managerial attention since the majority of managers in the hospitality industry are female. Today, as more women are being educated and encouraged to seek managerial appointments in the foodservice industry, foodservice corporations should be more supportive of female managers to gain respect and confidence from their supervisors and subordinates [6].

It is true that demographic and organizational characteristics can be personal and situational factors that influence job burnout perceptions [4]. Unfortunately, however, they cannot be changed or managed easily. Thus, research findings focusing on demographic characteristics of employees and organizations do not provide rich information for practitioners on how to manage front line managers' stress and job burnout. Therefore, researchers have shifted their interest to the roles of job demands and resources in finding ways to manage burnout effectively.

Based on the JD-R model and LMX theory, workload and LMX were selected as the job demand and resource for this study, respectively. The responding dietitians and chefs in the contract management corporation perceived workload moderately. When PA and NA were controlled, workload was a significant predictor of emotional exhaustion and professional efficacy. When PA and NA were controlled, however, workload did not influence cynicism significantly. This finding of the study is partially consistent with the literature.

Work overload was reported to be more closely related to emotional exhaustion [4]. Previous research has revealed that work overload such as job demands, lack of autonomy, and emotional demands can lead to exhausted feelings and callous attitudes towards work [38,39]. Maslach and Jackson [40] reported that cynicism or depersonalization developed as a coping response to work overload, but the relationship was not confirmed in the study.

A survey with foodservice managers revealed that long work hours were one of the most important reasons for turnover [9], and Lee and Kim [7] reported that job stress was positively correlated with work overload among foodservice employees. Krone *et al.* [25] also reported that managers working over 70 hours per week were more emotionally exhausted than those working under 60 hours in hospitality settings.

The literature has shown that both the quantity (e.g., hours worked, work overload, and time pressure) and quality (role conflict, role ambiguity, and role overload) of work demands influence job burnout [4]. Krone *et al.* [24,25] suggested the possible effects of role overload on burnout among food and beverage service and food production employees. They observed that burnout is greater at lower management levels where managers must perform a wide variety of tasks under time

pressure and dynamic and unpredictable environments while constantly juggling conflicting interests of employees, customers, and organizations. Lee and Shin [5] reported that dietitians perceived workload significantly higher than chefs in a contract management company. They explained the higher workload perception in the dietitian group by qualitative workload. In institutional foodservice, dietitians conduct a wide range of tasks including menu planning, purchasing, financial/accounting management, nutrition and food safety management, scheduling, handling paperwork, and attending to customer needs.

Chefs, middle level managers in the culinary field, are also exposed to an environment of unique and constant stress. The frequently mentioned stressors for chefs are a hectic pace, long working hours, high energy levels required to succeed, workplaces with potential dangers such as hot ovens and slippery floors, and fluctuation in work demands by daily business flow [26,41]. A chef's work becomes more complex since they work in the manufacturing production environment where they cannot face customers directly but are judged in a service environment. Fine [42] stated that the conflict between the aesthetics of culinary arts and the realities of production is a cause of job stress. In this study, workload was the only job demand but role overload can be incorporated in future studies to better understand job burnout in foodservice managers.

Among job resources, support from supervisors can influence stress perceived by their subordinates. In a hotel setting, middle managers perceiving less support from their supervisors may experience more burnout than those perceiving sufficient support [6]. Thomas and Lankau [14] stated that the quality of the relationship with a leader represents a valuable resource that can help employees cope with job demands and reduce the likelihood of burnout. In this study, support from supervisors was measured by the quality of relationships between supervisors and subordinates. LMX theory assumes that a supervisor has a unique relationship with each subordinate and that these dyadic relationships vary in quality. High quality LMX is characterized by higher levels of mutual trust, respect, liking, interaction, and support [14]. A review by Gerstner and Day [43] revealed that LMX is significantly correlated with increased subordinate satisfaction, increased subordinate performance, enhanced subordinate career outcomes, and decreased propensity to quit.

The four dimensions of LMX were rated from 4.1-4.7 based on a 7-point scale. Among the respondents, LMX seemed to be at moderate levels since dietitians and chefs in contract management corporations work without the support of someone with a similar background or a supervisor's direct control on site. In many cases, one dietitian and one chef are placed in each operation. Contrary to the hypotheses, LMX did not influence any burnout dimensions independently in three models. Thomas and Lankau [14] reported from a study of employees in a health care setting that high LMX supervisors serve as resources that minimize emotional exhaustion through increased socialization and decreased role stress. Seltzer and Numerof [44] found that

subordinates reported less burnout when their supervisors provided a higher amount of consideration behaviors and greater autonomy.

In the present study, a significant buffering effect of LMX on the relationship between workload and burnout was found for cynicism. When the unit managers perceived higher LMX, workload increased cynicism less than when they perceive lower LMX. Byrne and Hochwarter [45] found that perceived support enhances employees' performance by affecting the degree of burnout, especially the cynicism dimension. Bakker *et al.* [46] found that the impact of job demands such as workload, physical demands, and patient harassment on emotional exhaustion was particularly strong when home-care professionals had few resources like autonomy, possibilities for professional development, and performance feedback. In their study of employees at a higher education institute, Bakker *et al.* [13] also showed that job demands influenced burnout only when employees possessed few job resources (autonomy, social support, supervisory coaching, and feedback).

Supervisors are in positions to have the chance to recognize subordinates' burnout symptoms and take corrective action before early symptoms become obvious burnout. Supervisors and subordinates in these relationships may be more likely to communicate with one another about effective role management. The findings suggest that foodservice corporations can reduce middle managers' job burnout even when it is difficult to reduce or redesign job demands and organizational characteristics. Therefore, supervisors of dietitians and chefs should try to develop high quality LMX.

Many researchers suggest that organizations should focus on preventing rather than managing burnout [47]. In addition to supervisors' support, social support from co-workers, family, friends, and others is an effective stress management practice. Social support refers to a person's interpersonal transactions with others. Social support is effective in reducing stress by improving employees' perceptions that they are valued and worthy, providing information to help employees interpret, comprehend, and possibly remove the stressor, and offering emotional support directly helping to buffer the stress experience [1]. Buick and Thomas [6] reported that middle hotel managers who perceived less support from family experienced more burnout. Creative family-friendly and work/life initiatives could be helpful, considering significant numbers of managers in foodservice corporations are female [1].

From a study with hotel employees, Kim *et al.* [48] stated that support from colleagues moderated the effects of emotional labor on cynicism. They explained that cynicism is a response related to people, and that cynicism could be mitigated by peers who the employees had significant contact with during working hours. Dietitians and chefs who are in charge of managing units in a contract management corporation often work without the support of a person with a similar background, since one dietitian and one chef are placed in each operation in many cases. Therefore,

finding mentors or collaborative colleagues within a corporation and joining a professional group to share experiences may be helpful [49]. In organizational levels, support from the human resource department can be provided. Buick and Thomas [6] viewed that the increasing number of specialists and professionals in hotel HR departments is an optimistic movement towards a better work environment.

This study was limited to dietitians and chefs in one foodservice corporation whose operations are located nationwide. Future research should incorporate more corporations to reflect diverse organizational environments and investigate the effects of other job demands and resources such as role overload, organizational supports, and autonomy, with desires to mitigate harmful personal and organizational effects. As today's employees have various and new types of social networks like Twitter, the effects of these different social networks can also be evaluated. Today's technological advances may be used by dietitians and chefs to network within their corporation and outside their corporation.

References

1. McShane SL, Von Glinow MA. Organizational Behavior. Seoul: Irwin McGraw-Hill; 2000; p.134-50.
2. Lazarus RS. From psychological stress to the emotions: a history of changing outlooks. *Annu Rev Psychol* 1993;44:1-21.
3. Maslach C, Jackson SE. The measurement of experienced burnout. *J Occup Behav* 1981;2:99-113.
4. Maslach C, Schaufeli WB, Leiter MP. Job burnout. *Annu Rev Psychol* 2001;52:397-422.
5. Lee KE, Shin KH. Job burnout, engagement and turnover intention of dietitians and chefs at a contract foodservice management company. *Korean J Community Nutr* 2005;7:100-6.
6. Buick I, Thomas M. Why do middle managers in hotels burn out? *Int J Contemporary Hospitality Manage* 2001;13:304-9.
7. Lee J, Kim Y. A study on the relations of job stress and turnover intention about the employee of F&B. *J Tour Manage Res* 2002;16: 217-41.
8. Kang B, Twigg NW, Hertzman J. An examination of social support and social identity factors and their relationship to certified chefs' burnout. *Int J Hospitality Manage* 2010;29:168-76.
9. Ghiselli RF, La Lopa JM, Bai B. Job satisfaction, life satisfaction, and turnover intent. *Cornell HRA Quart* 2001;42:28-37.
10. Vallen G. Organizational climate and burnout. *Cornell HRA Quart* 1993;34:54-9.
11. Ingram A, Brown S. Labor turnover in four and five crown Edinburg hotels: managers' perceptions and strategies to cope. *Praxis* 2000; 2:80-99.
12. Kwak TK, Ryu ES, Lee HS, Ryu K, Choi SK, Hong WS, Jang MR, Shin ES, Moon HK, Jang HJ, Park SJ, Choi EH, Lee KE. *Institutional Foodservice Operations*. Seoul: Shin Kwang Publishing Co., 2008. p.14-15.
13. Bakker AB, Demerouti E, Euwema MC. Job resources buffer the impact of job demands on burnout. *J Occup Health Psychol* 2005;10:170-80.
14. Thomas CH, Lankau MJ. Preventing burnout: the effects of LMX and mentoring on socialization, role stress, and burnout. *Hum*

- Resour Manage 2009;48:417-32.
15. Schaufeli WB, Bakker AB. Job demands, job resources and their relationship with burnout and engagement: a multi-sample study. *J Organ Behav* 2004;25:293-315.
 16. Bakker AB, Demerouti E, Verbeke W. Using the job demands-resources model to predict burnout and performance. *Hum Resour Manage* 2004;43:83-104.
 17. Humberstad SI, Humberstad B, Whitfield R. Burnout and service employees' willingness to deliver quality service. *J Hum Resour Hosp Tour* 2008;7:45-64.
 18. Tabacchi M, Krone C, Farber B. A support system to mitigate manager burnout. *Cornell HRA Quart* 1990;31:32-7.
 19. Graen GB, Uhl-Bien M. Relationship-based approach to leadership: Development of leader-member exchange(LMX) theory of leadership over 25 years: applying a multi-level multi-domain perspective. *The Leadership Quarterly* 1995;6:219-47.
 20. Lee HH, Kim EJ, Lee MK. A validation study of Korea positive and negative affect schedule: The PANAS scales. *Korean J Clin Psychol* 2003;22:935-46.
 21. Spector PE, Jex SM. 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. *J Occup Health Psychol* 1998; 3:356-67.
 22. Maslach C, Jackson SE, Leiter MP. *Maslach Burnout Inventory Manual 3rd ed.* Palo Alto, CA: Consulting Psychologists Press; 1996. p.10.
 23. Liden RC, Maslyn JM. Multidimensionality of leader-member exchange: an empirical assessment through scale development. *J Manage* 1998;24:43-72.
 24. Krone C, Tabacchi M, Farber B. Managers. *Cornell HRA Quart* 1989;30:58-63.
 25. Krone C, Tabacchi M, Farber B. A conceptual and empirical investigation of workplace burnout in foodservice management. *Hospitality Edu Res J* 1989;13:83-91.
 26. Reynolds D. Mitigating burnout in foodservice management. *Nations Restaurant News* 1995;29:32-4.
 27. Kim HJ, Shin KH, Umbreit WT. Hotel job burnout: the role of personality characteristics. *Int J Hospitality Manage* 2007;26: 421-34.
 28. Song NC, Lee HS, Lee KE. The factors (job burnout, job engagement, the workplace safety) influencing employees' job satisfaction in school food service operations. *Korean J Community Nutr* 2007;12:606-16.
 29. Demerouti E, Bakker AB, Nachreiner F, Schaufeli WB. The job demands-resources model of burnout. *J Appl Psychol* 2001;86: 499-512.
 30. Demir A, Ulusoy M, Ulusoy MF. Investigation of factors influencing burnout levels in the professional and private lives of nurses. *Int J Nurs Stud* 2003;40:807-27.
 31. Borchgrevink CP, Boster FJ. Leader-member exchange development: a hospitality antecedent investigation. *Int J Hospitality Manage* 1997;16:241-59.
 32. Iverson RD, Olekalns M, Erwin PJ. Affectivity, organizational stressors, and absenteeism: A causal model of burnout and its consequences. *J Vocat Behav* 1998;52:1-23.
 33. Ettner SL, Grzywacz JG. Workers' perceptions of how jobs affect health: a social ecological perspective. *J Occup Health Psychol* 2001;6:101-13.
 34. Hoge T, Bussing A. The impact of sense of coherence and negative affectivity on the work stressor-strain relationship. *J Occup Health Psychol* 2004;9:195-205.
 35. Yun HJ, Lee JE, Hong WS. A study on factors of job satisfaction and burnout of hospital dietitians. *Korean J Community Nutr* 2009;14:100-13.
 36. Lee HS. Factors influencing on the job satisfaction and the turnover intention of dietitians working in the institutions for the disabled in Korea-Focused on the general characteristics and the job burnout. *Korean J Community Nutr* 2009;14: 182-9.
 37. Fall ML, Wolf KN, Schiller MR, Wilson SL. Dietetic technicians report low to moderate levels of burnout. *J Am Diet Assoc* 2003; 103:1520-2.
 38. Jackson EJ, Turner JA, Brief AP. Correlations of burnout among public service lawyers. *J Organ Behav* 1987;8:338-49.
 39. Lee RT, Ashforth BE. A meta-analytic examination of the correlates of the three dimensions of job burnout. *J Appl Psychol* 1996;81: 123-33.
 40. Maslach C, Jackson SE. Burnout in organizational settings. *Appl Soc Psychol Annu* 1984;5:133-53.
 41. Bureau of Labor Statistics [Internet]. *Occupational Outlook Handbook 2010-2011 Edition*. [cited 2010 November 22]. Available from: <http://www.bls.gov/oco>.
 42. Fine GA. The culture of production: aesthetic choices and constraints in perceptions and union participation. *Am J Sociol* 1992;97: 1268-94.
 43. Gerstner CR, Day DV. A meta-analysis review of leader-member exchange theory: Correlates and construct issues. *J Appl Psychol* 1997;82:827-44.
 44. Seltzer J, Numerof R. Supervisory leadership and subordinate burnout. *Acad Manage J* 1998;31:439-46.
 45. Byrne ZS, Hochwarter WA. Perceived organizational support and performance. *J Manage Psychol* 2008;23:54-72.
 46. Bakker AB, Demerouti E, Taris T, Schaufeli WB, Schreurs P. A multi-group analysis of the job demands-resources model in four home care organizations. *Int J Stress Manag* 2003;10:16-38.
 47. Van Dierendonck D, Schaufeli WB, Buunk BP. Toward a process model of burnout: results from a secondary analysis. *European J Work Organizat Psychol* 2001;10:41-52.
 48. Kim WH, Shin KH, Heo CG, Lee JH. Emotional labor and burnout: the moderating effect of autonomy and social support. *Korean J Health Psychol* 2007;12:905-21.
 49. Mortensen JK, Nyland NK, Fullmer S, Eggett DL. Professional involvement is associated with increased job satisfaction among dietitians. *J Am Diet Assoc* 2002;102:1452-4.