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Analysis of Causal Relationship between Chinese Restaurant Chefs' Work Environment and Burnout : Focused on Moderation Role of Enthusiasm

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Abstract

Purpose - The current study attempts to enhance competitiveness by improving Chinese restaurant chefs' work environment and analyzes its effect on work environment and burnout. Also, this study analyzes to see if there is moderation role of enthusiasm between work environment and burnout. Based on analyzation, the present study aims to suggest more effective measure of human resource management by reducing burnout and turnover through providing chefs with more stable and consistent work environment and through their enthusiasm.

Research design, data, methodology - Surveys were distributed to chefs working in Chinese restaurant in Seoul and Kyunggi region. Total of 500 surveys were distributed between September 1, 2017 and September 20, 2017 (about 20 days), and 417 surveys were returned to be used in the analysis.

Results - As a result of testing effect of chefs' work environment on burnout (1) welfare environment, personal environment, and institution environment had significant effect on loss of accomplishment. (2) welfare, personal, and institution environment had significant effect on deindividuation. (3) welfare environment and institution had significant effect on emotional deprivation while personal environment did not. Second, as a result of analysis on moderation role of obsessive enthusiasm between Chinese restaurant chefs' work environment and burnout (1) as a result of interaction between work environment and loss of accomplishment, personal environment had significant effect while welfare environment and institution environment did not. (2) As a result of interaction between work environment and deindividuation, welfare, personal, and institution environment did not have significant effect. (3) As a result of interaction between work environment and emotional deprivation, institution environment had significant effect while personal environment and welfare environment did not.

Conclusions - There is manpower shortage due to poor work environment of Chinese restaurant. Studies that are not limited to work environment are needed to more efficiently utilize human resources.

Keywords: Work Environment, Burnout, Enthusiasm, Obsessive Passion.

JEL Classification Code: C12, J81, L84, M12.

1. Introduction

In keenly competitive society, corporations metamorphose themselves by rapid change, globalization, and diversity. This has made members of corporation pursue adaption to new environment and innovation. This has a big impact on human resource management environment. Especially, as a labor-intensive industry, restaurants have high reliance on human resource of employees compared to other industries (Um & Lee, 2004).

Restaurants still have limitation for mechanization as most of the work require manual labor, and this makes them to have high dependence on human resources (Shin & Kim, 2005). Moreover, work itself has highly specialized traits, including definitude on responsibility (Chae, 2006). Also, chefs require high work ethic as their work environment has noise and high physical fatigue due to dangerous apparatus and heat, and has high turnover rate because of heavy workload with limited personnel, irregular vacation and working hours, low compensation, and requirement of concentration (McCabe, 2001). As an important factor of accomplishing organization's goal under chefs' work environment, burnout and enthusiasm have been politicized (Shin & Kang, 2007).

Under this circumstance, restaurant's quality of service produced by human resources, determined by endowment of chefs, depends on work environment toward human resources unlike other industries. In order to provide quality service, providing good work environment and enthusiasm leads to reduced burnout and turnover. Through this, restaurants can achieve one of the most important factors for accomplishing organization's goal and producing quality of service.

Recently, there has been increased attention in restaurant industry toward work environment and burnout, which has led to increased study regarding it. In order for chefs' work environment to have positive effect on burnout, the role of organization's support is important. Active support from organization or superior has ability to increase chefs' job satisfaction and to suppress job dissatisfaction (Kim, 2016). Therefore, verification test on effect of sympathy of chefs and customers on chefs' emotional labor and effect of chefs' work environment on work satisfaction and burnout. Also, there is no study on structural causal relationship on work environment and burnout or enthusiasm yet.

It is said that chefs' kitchen environment in restaurant have enormous effect on chef's work. Especially, chefs interact with incidents and people by establishing, maintaining, or destroying relationship with kitchen environment. If interaction is uncomfortable, chefs try to reduce or block relationship. If someone is experiencing or expressing stress, it means that there is subject of stress. Since there is always interaction with superior, subordinate, coworker in an organization, people have to consider only people experiencing their stress but also people receiving stressing expression.

In case of study on common Chinese restaurant chef's work environment and burnout, there has been some progress, but still is insufficient. Therefore, the present study analyzes Chinese chefs' work environment on burnout. Also, it attempts to analyze if there is moderation effect of enthusiasm between work environment and burnout.

Based on analysis, the present study aims to provide more efficient way or managing Chinese restaurant's human resources by providing chefs with stable and consistent work environment and reducing burnout or turnover through enthusiasm.

2. Literature Review

2.1. Work Environment

Work environment refers to all the situations which directly or indirectly influences responsibility given according to job or position and duty. Work environment usually means environment in work place, and comprehensive meaning of work place is subjective, and scholars have different definition of it leading to various research result (Lee, Kim, & Shin, 2015).

Work environment refers to degree of satisfaction in which members of organization are (Park & Kim, 2012). Therefore, work environment was defined as comprehensive concept which includes individual-driven values – such as compensation, promotion, job stability, and interest – and public value and job conditions – such as autonomy, altruism, and publicness (Kim & Lim, 2009).

Scholars have suggested different factors which influence work environment (Hackman & Oldham, 1975; Gilmer, 1966; Locke, 1976; Cook, Hepworth, Wall, & Warr, 1981; Perter et al., 1975; Smith et al., 1969; Stamps et al., 1978; Cook, Hepworth, Wall, & Wall, 1981; Sersshore & Taber, 1975; Ackman & Oldham, 1975; Jayaratne &

Chess, 1981; Stinlhamber & Vandenberghe, 2004; Yoon, 2004; Kim, 2005; Suh, 2013; Han, 2016; Park & Sul, 2011; Ahn, Oh, & Jung, 2013; Lee, 2015, 2016; Park & Yoon, 2014).

As internal factors which influence work environment, Porter et al. (2015) suggested task responsibility, meaningful tasks, exhibiting various techniques and abilities, opportunity and participation during activity, autonomy, and information exchange. And they suggested compensation, welfare benefits, supervision, promotion and coworkers as external factors. Smith et al. (1929) divided work environment factors into five categories – task, compensation, promotion, supervision, and coworkers. Stamps et al. (1978) divided work environment factors into six categories – compensation, autonomy, working condition, policy and rule of organization, interpersonal relation, and importance of tasks.

Locke (1976) divided work environment into task or situation and performer. Task and situation included six factors – task itself, compensation, promotion, recognition, working condition and fringe benefits. Performer included factors such as value, technology, ability, supervisor, coworker, customer, etc. Sersshore and Taber (1975) consolidated various scholars' studies and divided factors relevant to leading variable of work environment into environmental factors and personal factors.

Suh (2013) saw work environment as a situational factor which includes physical environment influencing job performance and a physical characteristic – including working condition, working condition related to time, and social working condition – as well as tangible and intangible factors recognized by members of organization.

Lee (2015, 2016) referred work environment as general environment which includes individual working condition and environment which helps workers do their tasks efficiently. He divided work environment into facility environment, job environment, and personal environment. Park and Yoon (2014) performed factor analysis regarding work environment, and differentiated it into personal environment, welfare environment, and facility environment.

As a result of reviewing these prior studies, the current study attempts to use work environment factors to measure personal environment, welfare environment and facility environment

2.2. Burnout

For studies on burnout, it is hard to differentiate cause and effect clearly (Cooper, Dewd, & O'Driscoll, 2001). Schaufeli and Enzmann (1988) organized studies on leading variables of burnout into individual, interpersonal, and organizational levels using MBI (Maslach Burnout Inventory). Cordes and Dougherty (1933) organized cause and effect of burnout based on various scholars' studies.

Although many studies are in progress (Maslach, 1978; Maslach & Jackson, 1981, 1986; Fisher & Gitelson, 1983; Ganster & Schaubroeck, 1991; Walkey & Green, 1992, Schaufeli & Bakker, 2004), there is a few studies on chefs (Park, 2010; Kim, Yoon, & Jung, 1991; Heo & Lee, 2015; Kim, 2016).

Maslach (1978) defined burnout as loss of interest in workers as a response to stress related to work. This loss of interest means specific reaction tendency to face other people mechanically. Maslach and Jackson (1981, 1986) sorted elements of burnout into emotional exhaustion, deindividuation, and reduced performance.

Leiter and Maslach (1988)'s study suggests interpersonal contact or encounter type as a leading factor of burnout. They divided interpersonal contact or type into pleasantness and unpleasantness, and they show that unpleasant encounter to coworker or supervisor has positive relationship with emotional exhaustion and that pleasant encounter to coworker or supervisor has positive relationship with personal accomplishment. It is hard to say that it is pleasant to encounter a customer with lack of information on task or to encounter supervisors while there is lack of consistency in terms of work directive. Therefore, these factors can contribute to cause burnout.

Ganster and Schaubroeck (1991) sees burnout as chronic emotional pattern of a member of an organization to work environment surrounding him. Burnout is in one of the work stress which happens in work situation with occasional interpersonal relationship and stress. In a review related to burnout, Cordes and Dougherty (1993) insists that these patterns of members in working situation hinders work performance and is a different type of work stress syndrome from general stress syndrome.

Walkey and Greens (1992) insisted that the loss of personal accomplishment is not one of the core components of burnout. Cooper et al. (2001) insisted that it is unclear to see cynicism represent burnout in study's job. In a study which investigated burnout and job passion's job requirement-resource model, Schaufeli and Bakker (2004) insisted that it is more suitable to say that personal accomplishment (job efficiency) is a sub-factor of job passion which is positive antonym of burnout.

Based on above previous study results, the current study attempts to use loss of accomplishment, deindividuation, and emotional deprivation to measure burnout factors.

2.3. Enthusiasm

The Middle age philosophers considered passion and action of unreasonable emotional desire which includes pain and passivité. An enthusiastic individual about something will bring up unreasonable thinking and behavior since he is controlled by that passion. In Christianity's point of view, enthusiasm was a sin and a way to grow way from God (Meyer, 2004). Other philosophers stated that rationality belongs to the "high level" of human's mentality, whereas enthusiasm is an action of "emotional desire" which belongs to "low level" (Thomas). Enthusiasm is said as "various tendencies which carry pleasure and pain" and intrinsic treat of "irrational part" of human mentality (Kim, 1987; Meyer, 2004; Vallerand et al., 2003).

However, enthusiasm is fundamentally not a negative thing, and philosophical studies on definition and value of enthusiasm had influence on psychology, education, and management (Kim, 1987; Kim, 2004; Kim & Lee, 2004; Rousseau et al., 2002). Especially, psychologists defined enthusiasm as "the ultimate goal to achieve emotionally important result", and emphasized motivational side of enthusiasm (Frijda et al., 1991). People tend to invest more time and effort to accomplish their important goals.

In detail, Vallerand et al. (2003) defined enthusiasm as "strong tendency for people to invest their time and energy for things that they value" and insister dualistic approach. Dualistic approach states that depending on whether "enthusiastic activity internalize individual's self and identity", it can be classified as harmonious passion or obsessive passion (Vallerand et al., 2003).

Most of the previous studies focused on positive effect of enthusiasm such as high accomplishment (Vallerand et al., 2008) and well-being (Carpentier, Mageau, & Vallerand, 2012). Even though enthusiasm can be deemed as positive thing when it is controlled by an individual and based on rationality, enthusiasm can be negative when there is no control of behavior (Mageau et al., 2009). In detail, positive enthusiasm can be necessary nutrition for high accomplishment (Vallerand et al., 2008), but unreasonable enthusiasm can cause collision with ordinary things (Vallerand, 2010), or guilt, waste of time and money, or anxiety (Lee et al., 2014).

In response, Vallerand et al. (2003) considers that in Deciand Ryan (1985)'s self-determination theory, harmonious enthusiasm comes from internalization of behavioral regulation, but obsessive enthusiasm comes from individual and interpersonal pressure when internal desire is not satisfied (Mageau et al., 2009). In turn, Rousseau, Vallerand, Ratelle, Mageau, and Provencher (2002) came up with measurement item of harmonious enthusiasm and obsessive enthusiasm, and its credibility and validity was investigated by various following studies (Lee et al., 2013; Ratelle et al., 2004; Wang & Chu, 2007).

In the current study, based on dualistic enthusiasm theory, Vallerand et al. (2003)'s chef's harmonious enthusiasm is considered to come from internalization of behavioral regulation, whereas obsessive enthusiasm is considered to come from individual and interpersonal pressure when internal desire is not satisfied (Mageau et al., 2009).

Based on previous studies, the current study attempts to use harmonious enthusiasm and obsessive enthusiasm to measure enthusiasm factors.

3. Study Design

3.1. Research Model and Hypotheses

The current study attempts to enhance competitiveness by improving Chinese restaurant chefs' work environment and analyzes its effect on work environment and burnout. Also, this study analyzes to see if there is moderation role of enthusiasm between work environment and burnout.

Study model of the current study, based on supervision of previous studies and related document, is as follow:

3.2. Research Hypothesis

3.2.1. Relationship between Chef's Work Environment and Burnout (Hypotheses 1, 2, and 3)

Based on prior studies of Bandura (1997), Jun, Kang, and Kim (2007), Heo (2009), Jang & Yoon (2010), Kim (2010), Park, Nah, & Kim (2011), Park & Yoon (2014), Kim and Kim (2015), Lee (2016, 2015), and Kim (2016), it

is expected that chef's work environment factors – welfare environment, human environment, and institution environment – will have significant effect on burnout (loss of accomplishment, deindividuation, and emotional deprivation). Therefore, the following hypotheses were set up:

Hypothesis 1: Chef's work environment factor will have significant effect on burnout (loss of accomplishment).

Hypothesis 2: Chef's work environment factor will have significant effect on burnout (deindividuation)

Hypothesis 3: Chef's work environment factor will have significant effect on burnout (emotional deprivation).

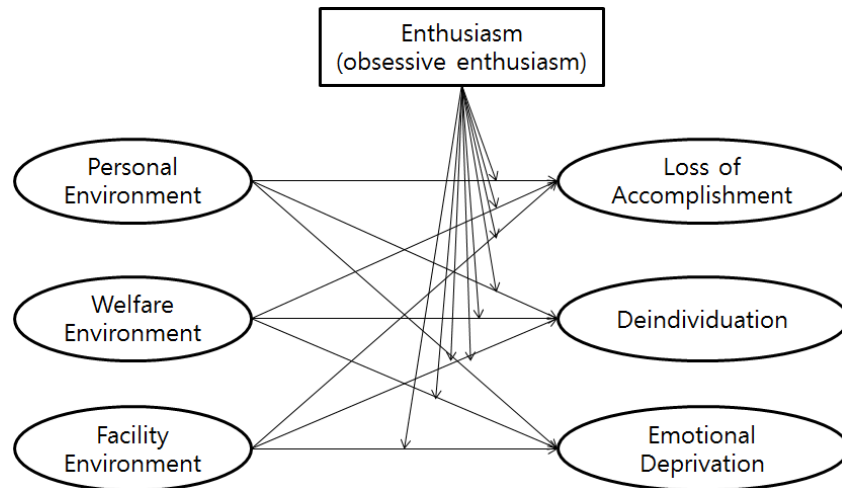


Figure 1: Research Model

3.2.2. Moderation Role of Chef's enthusiasm (Obsessive Enthusiasm) (Hypothesis 4)

Based on prior studies of Ratelle et al. (2004), Piccolo et al. (2010), Bonneville-Roussy, Vallerand, and Bouffard (2013), Lee et al. (2013), Wang and Chu (2007), Cha, Lee, Heo, and Kim (2016), and Son and Kim (2016), it is expected that there would be a significant moderation role of enthusiasm (obsessive enthusiasm) between work environment factors and burnout. Therefore, the following hypotheses were set up:

Hypothesis 4: Chef's enthusiasm (obsessive enthusiasm) will have moderation role between work environment factor and burnout (loss of accomplishment, deindividuation, and emotional deprivation).

Hypothesis 4-1: Chef's enthusiasm (obsessive enthusiasm) will have moderation role between work environment factor and burnout (loss of accomplishment).

Hypothesis 4-2: Chef's enthusiasm (obsessive enthusiasm) will have moderation role between work environment factor and burnout (deindividuation).

Hypothesis 4-3: Chef's enthusiasm (obsessive enthusiasm) will have moderation role between work environment factor and burnout (emotional deprivation).

3.3. Operational Definition of Factors

3.3.1. Operational Definition of Chef's Work Environment

In order to measure chef’s work environment, the current study investigated validity and reliability based on developed index used by Molloy (1990), Heo (2009), Kim (2011), Park, Nah, and Kim (2011), Lee (2015, 2016), and Park and Yoon (2014).

As mentioned in theoretical contemplation, chef’s work environment consists of human environment, welfare environment, and institution environment; and each item was measured using 7-point Likert scale.

3.3.2. Operational Definition of Burnout

In order to measure burnout, the current study investigated validity and reliability based on developed index used by Maslach and Jackson (1981, 1986), Fisher and Gitelson (1983), Walkey and Green (1992), Dormann and Zapf (2004), Schaufeli and Bakker (2004), Park (2010), Kim (2015), and Kim (2016).

As mentioned in theoretical contemplation, burnout consists of loss of accomplishment, deindividuation, and emotional deprivation; and each item was measured using 7-point Likert scale.

3.3.3. Operational Definition of Enthusiasm

In order to measure enthusiasm, the current study investigated validity and reliability based on developed index used by Rousseau, Vallerand, Ratelle, Mageau, and Provencher (2002), Mageau et al. (2009), Vallerand et al. (2003), Son and Kim (2013), and Cha, Lee, Heo, and Kim (2016).

As mentioned in theoretical contemplation, enthusiasm consists of obsessive enthusiasm and harmonious enthusiasm; and each item was measured using 7-point Likert scale.

3.4. Sampling and Collecting Data

To achieve the current study’s goal, it utilized self-recording survey method. Total of 500 surveys were distributed between September 1, 2017 and September 20, 2017 (about 20 days), and 417 surveys were returned to be used in the analysis.

4. Empirical Testing

4.1. Demographical Traits of the Sample

The frequency analysis result of sample’s demographical trait is as shown in <Table 1>.

Table 1: Demographical Traits of the Sample

	Classification	Frequency	Percentage
Gender	Male	380	91.1
	Female	37	8.9
Age	20s	45	10.8
	30s	125	30.0
	40s	166	39.8
	50s	81	39.8
Education	Below Middle School Diploma	52	12.5
	High School Diploma	254	60.9
	Bachelor’s Degree	99	23.7
	Master’s Degree (including current students)	9	2.2

	Doctorate (including current students)	3	0.7
Employment Form	Permanent Employee	280	67.1
	Temporary Employee	92	22.1
	Others	45	10.8
Position	Noodle Cook	52	12.5
	3rd Chef	24	5.8
	2nd Chef	77	18.5
	1st Chef	203	48.7
	food Cutting Cook	44	10.6
	Fried Food Cook	17	4.1
Average Monthly Income	Below 2.5 Million Won	65	15.6
	2.5-3.0 Million Won	82	19.7
	3.0 - 3.5 Million Won	75	18.0
	3.5 - 4.0 Million Won	100	24.0
	4.0 - 4.5 Million Won	43	10.3
	4.5 - 5.0 Million Won	31	7.4
	5.0 - 5.5 Million Won	12	3.6
	Above 5.5 Million Won	6	1.4
Work Period in Current Chinese Restaurant	Less than 1 year	86	20.6
	1-3 years	118	28.3
	3-6 years	76	18.2
	More than 6 years	137	32.9
Work Experience in Restaurant	Less than 3 years	45	10.8
	3-10 years	79	18.9
	10-17 years	93	22.3
	17-24 years	105	25.2
	More than 24 years	95	22.8
Total		417	100.0

4.2. Testing Measured Variables' Reliability and Validity

As a preliminary analysis to test the current study's hypotheses, reliability testing and validity testing were performed. Correlation analysis was also performed to apprehend relationship and directionality among variables.

4.2.1. Reliability and Factor Analysis of Work Environment

The result of reliability and factor analysis of work environment is as shown in <Table 2>. In the current study, there were total of three factors with characteristic value of greater than 1.0, and each factor was named personal environment, institution environment, and welfare environment.

Table 2: The Result of Reliability and Factor Analysis of Work Environment

Factor	Measured Variable	Factor Load Value	Characteristic Value	Variance Explanation Power	Cronbach's α
Welfare Environment	My company understands my adjustment of grievance.	0.904	4.095	25.812	0.985
	I am satisfied with welfare benefit provided.	0.900			
	I am satisfied with my working condition (working hours).	0.857			
	There are reasonable personnel management system (employment, contract, etc.).	0.792			
Personal Environment	My coworkers and superiors assist me with my work.	0.875	2.216	25.188	0.802
	My superiors advise me well with my work and procedure.	0.869			
	I am given flexibility regarding my given tasks.	0.825			
	My superiors provide adequate compliment and reward for my accomplishment.	0.806			
Institution Environment	Kitchen has enough workspace for chefs to cook.	0.729	1.685	15.631	0.901
	Kitchen is equipped with heating and cooling system suitable for cooking.	0.688			
	Kitchen is equipped with safety facilities.	0.672			
	Kitchen is equipped with soundproof facility for noise.	0.610			
KMO = .816, Bartlett's sphericity = 2373.710, df = 66, p = .000					
*Factors with Eigen value of greater than 1 were extracted, and cumulative variance explanation coefficient of all factors is 66.631%					

With KMO value of 0.816 and cumulative variance explanation coefficient of 66.613%, there is enough explanation power. Also, most of the factors' load value was 0.5 which means that there is enough of importance as factors and central relevance. As a result of Bartlett's sphericity testing, approximate chi-square value was 2373.710, and when degree of freedom is 66, probability was 0.000 within significant level of 5% which means it is appropriate for factorial analysis. Also, as a result of reliability resting, all three factors have Cronbach's α value of 0.8 validating measured factors' reliability and it turned out that there is internal consistency as well.

4.2.2. Reliability and Factor Analysis of Burnout

The result of reliability and factor analysis of burnout is as shown in <Table 3>. In the current study, there were total of three factors with characteristic value of greater than 1.0, and each factor was named loss of accomplishment, deindividuation, and emotional deprivation.

Table 3: The Result of Reliability and Factor Analysis of Burnout

Factor	Measured Variable	Factor Load Value	Characteristic Value	Variance Explanation Power	Cronbach's α
Loss of Accomplishment	I think I am handless at task.	0.902	5.048	24.252	0.889
	I do not feel any sense of accomplishment and purpose after working	0.887			
	I have not achieved valuable things in my work	0.876			
	I cannot understand my tasks easily and manage them efficiently	0.783			
	I cannot effectively resolve problems occur during my work	0.633			
Deindividuation	I treat my coworkers and customers indifferently.	0.844	2.852	24.087	0.882
	I became indifferent to my coworkers and customers after working here.	0.839			
	I feel uncomfortable and disappointed about my coworkers after working here (restaurant).	0.822			
	I do not care about what happens to my coworkers and customers.	0.808			
	I am worried that I am becoming deindividualized due to my work (chef).	0.722			
Emotional Deprivation	I feel tired just to think about going to work in the morning.	0.834	2.177	18.844	0.804
	I am emotionally and mentally tired with my work.	0.809			
	I am totally exhausted after my work (emotional deprivation).	0.764			
	I think my work (chef) is too hard for me.	0.735			

	I am tired of encountering customers for whole day.	0.482			
KMO = .828, Bartlett's sphericity = 3703.304 df = 105, p = .000					
*Factors with Eigen value of greater than 1 were extracted, and variance explanation coefficient of all factors is 67.183%					

With KMO value of 0.828 and cumulative variance explanation coefficient of 67.183%, there is enough explanation power. Also, most of the factors' load value was 0.5 which means that there is enough of importance as factors and central relevance. As a result of Bartlett's sphericity testing, approximate chi-square value was 3703.304, and when degree of freedom is 105, probability was 0.000 within significant level of 5% which means it is appropriate for factorial analysis. Also, as a result of reliability resting, all three factors have Cronbach's α value of 0.8 validating measured factors' reliability and it turned out that there is internal consistency as well.

4.2.3. Reliability and Factor Analysis of Enthusiasm

The result of reliability and factor analysis of enthusiasm is as shown in <Table 4>. In the current study, there were total of one factor with characteristic value of greater than 1.0, and factor was named obsessive enthusiasm.

Table 4: The Result of Reliability and Factor Analysis of Enthusiasm

Factor	Measured Variable	Factor Load Value	Characteristic Value	Variance Explanation Power	Cronbach's α
Obsessive Enthusiasm	I cannot stop practicing cooking due to strong impulse of cooking.	0.730	1.176	76.283	0.933
	It is hard for me to imagine my life without cooking.	0.725			
	I cannot life without cooking.	0.721			
	I am emotionally dependent on cooking.	0.676			
KMO = .868, Bartlett's sphericity = 2624.122 df = 28, p = .000					
*Factors with Eigen value of greater than 1 were extracted, and variance explanation coefficient of all factors is 76.283%					

With KMO value of 0.868 and cumulative variance explanation coefficient of 76.283%, there is enough explanation power. Also, most of the factors' load value was 0.5 which means that there is enough of importance as factors and central relevance. As a result of Bartlett's sphericity testing, approximate chi-square value was 2624.122, and when degree of freedom is 28, probability was 0.000 within significant level of 5% which means it is appropriate for factorial analysis. Also, as a result of reliability resting, all three factors have Cronbach's α value of 0.8 validating measured factors' reliability and it turned out that there is internal consistency as well.

4.3. Correlation Analysis

Correlation analysis was performed to see that kind of relationship among constructs, and it turned out that correlation among all constructs are significant. It was shown that there is identical directionality among factors suggested in hypotheses. The result is shown in <Table 5>.

Table 5: Correlation Analysis

Factors	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Welfare Environment(1)	1						
Personal Environment(2)	.293**	1					
Institution Environment(3)	.197**	.076**	1				
Loss of Accomplishment(4)	.281**	.278**	.267**	1			
Deindividualization(5)	.511**	.378**	.271**	.260**	1		
Emotional Deprivation(6)	.210**	.087**	.524**	.302**	.188**	1	
Obsessive Enthusiasm(7)	.248**	.320**	.020**	.235**	.190**	.097**	1

N = 417, **: p<0.01, *: p<0.05

4.4. Testing Hypotheses

To test the current study’s hypotheses, multiple regression analysis and moderated regression analysis were performed.

4.4.1. Influencing Relationship between Chef’s Work Environment and Burnout (Loss of Accomplishment) (Hypothesis 1)

For the result of analysis on effects of three sub-factors of work environment on loss of accomplishment of burnout, independent variable’s explanation power on dependent variable was 16.6% with adjusted R² = 0.160. And independent variables – three sub-factors of work environment – welfare environment (t=3.961, p = .000), personal environment (t=4.457, p=.000), and institution environment (t=4.719, p=.000) had significantly positive (+) effect. Therefore, hypothesis has been accepted.

Table 6: Relationship between Work Environment and Burnout (Loss of Accomplishment)

Dependent Variable Independent Variable	Standard Error	Standardized Regression coefficient	t-value	p-value	Tolerance Limit	VIF
Dependent Variable: Loss of Accomplishment						
(constant)	.380		2.783	.006		
Welfare Environment	.052	.177	3.691	.000***	.883	1.132
Personal Environment	.059	.210	4.457	.000***	.914	1.095
Institution Environment	.056	.216	4.719	.000***	.961	1.041

R²= .166, Adjusted R²= .160, F=27.316, df1= 3, df2= 413, p=.000, D-W=1.782

*: p<.05, **: p<.01, ***: p<.001

4.4.2. Influencing Relationship between Chef’s Work Environment and Burnout (Deindividuation) (Hypothesis 2)

For the result of analysis on effects of three sub-factors of work environment on deindividuation of burnout, independent variable’s explanation power on dependent variable was 34.2% with adjusted R2 = 0.347. And independent variables – three sub-factors of work environment – welfare environment (t=9.552, p = .000), personal environment (t=5.930, p=.000), and institution environment (t=4.263, p=.000) had significantly positive (+) effect. Therefore, hypothesis has been accepted.

Table 7: Relationship between Work Environment and Burnout (Deindividuation)

Independent Variable \ Dependent Variable	Standard Error	Standardized Regression coefficient	t-value	p-value	Tolerance Limit	VIF
Dependent Variable: Deindividuation						
(constant)	.266		5.527	.000		
Welfare Environment	.036	.404	9.552	.000***	.883	1.132
Personal Environment	.041	.247	5.930	.000***	.914	1.095
Institution Environment	.039	.173	4.263	.000***	.961	1.041
R ² = .347, Adjusted R ² = .342, F=73.076, dfl = 3, df2= 413, p=.000, D-W=1.782						
*: p<.05, **: p<.01, ***: p<.001						

4.4.3. Influencing Relationship between Chef’s Work Environment and Burnout (Emotional Deprivation) (Hypothesis 3)

For the result of analysis on effects of three sub-factors of work environment on emotional deprivation of burnout, independent variable’s explanation power on dependent variable was 28.7% with adjusted R2 = 0.281. And independent variables – three sub-factors of work environment – welfare environment (t=2.383, p = .000) and personal environment (t=11.839, p=.000) had significant effect, but institution environment (t=0.409, p=.000) did not have significant effect. Therefore, hypothesis has been partially accepted.

Table 8: Relationship between Work Environment and Burnout (Emotional Deprivation)

Independent Variable \ Dependent Variable	Standard Error	Standardized Regression coefficient	t-value	p-value	Tolerance Limit	VIF
Dependent Variable: Emotional Deprivation						
(constant)	.321		3.377	.001		
Welfare Environment	.044	.105	2.383	.018*	.883	1.132
Personal Environment	.050	.018	.409	.682	.914	1.095
Institution Environment	.047	.502	11.839	.000***	.961	1.041
R ² = .287, Adjusted R ² = .281, F=55.324, dfl = 3, df2= 413, p=.000, D-W=1.488						
*: p<.05, **: p<.01, ***: p<.001						

*: p<.05, **: p<.01, ***: p<.001

4.4.4. Influencing Relationship between Work Environment and Burnout with Obsessive Enthusiasm (Hypothesis 4)

To test moderation role of obsessive enthusiasm in relationship of work environment (welfare environment, personal environment, and institution environment) and burnout, moderator regression analysis was performed as shown in <Table 9>, <Table 10>, <Table 11>, <Table 12>, <Table 13>, and <Table>14.

Table 9: Statistics on Moderation Effect of Obsessive Enthusiasm between Work Environment and Burnout (Loss of Accomplishment)

Model	R	R-Square	Corrected R-Square	Estimated Value of Standard Error	Statistics Variation				
					R-Square Variation	F Variation	df1	df2	Significance Probability F Variation
1	.407	.166	.160	1.11799	.166	27.316	3	413	.000***
2	.427	.182	.174	1.10828	.016	8.270	1	412	.004**
3	.446	.199	.186	1.10049	.017	2.951	3	409	.033*

*: p<.05, **: p<.01, ***: p<.001

Table 10: Moderation Role of Obsessive Enthusiasm between Work Environment and Burnout (Loss of Accomplishment)

Factors	Non-Standardized Coefficient		Standardized Coefficient	t	Significance Probability
	B	Standard Error	Beta		
(constant)	-1.512	1.719		-0.880	.380
Welfare Environment (a)	.219	.233	.202	.937	.349
Personal Environment (b)	.784	.288	.628	2.719	.007**
Institution Environment (c)	-.041	.223	-.034	-.185	.853
Obsessive Enthusiasm(d)	.702	.377	.969	1.861	.063
a*d	-.016	.046	-.150	-.347	.729
b*d	-.130	.061	-1.278	-2.131	.034**
c*d	.065	.046	.430	1.418	.157

*: p<.05, **: p<.01, ***: p<.001

As shown in <Table 9> and <Table 10>, as a result of regression analysis ($\Delta R^2 = .016$) of interaction, with moderation factor of obsessive enthusiasm, of two stage regression equation between dependence variable of loss of accomplishment among burnout and work environment, is increased and that F increment turned out to be significant ($\Delta F 8.270, p<.01$).

To test moderation role of obsessive enthusiasm, three stage regression analysis with all independent variables and interaction of moderation factor was performed, and it turned out that stage three ($R^2 = .199, p<.05$) turnout of to be significant and R^2 ($\Delta R^2 = .017$) has been increased with significant increment ($\Delta F 2.951, p<.01$). Therefore, the analysis result was partially accepted.

Table 11: Statistics on Moderation Effect of Obsessive Enthusiasm between Work Environment and Burnout (Deindividuation)

Model	R	R-Square	Corrected R-Square	Estimated Value of Standard Error	Statistics Variation				
					R-Square Variation	F Variation	df1	df2	Significance Probability F Variation
1	.589	.347	.342	.78329	.347	73.076	3	413	.000***
2	.589	.347	.340	.78420	.000	.040	1	412	.841
3	.592	.351	.339	.78482	.004	.782	3	409	.505

*: p<.05, **: p<.01, ***: p<.001

Table 12: Moderation Role of Obsessive Enthusiasm between Work Environment and Burnout (Deindividuation)

Factors	Non-Standardized Coefficient		Standardized Coefficient	t	Significance Probability
	B	Standard Error	Beta		
(constant)	1.559	1.226		1.272	.204
Welfare Environment (a)	.291	.166	.339	1.750	.081
Personal Environment (b)	.396	.206	.401	1.924	.055
Institution Environment (c)	-.024	.159	-.025	-.154	.878
Obsessive Enthusiasm(d)	.008	.269	.013	.029	.977
a*d	.009	.033	.112	.286	.775
b*d	-.035	.043	-.432	-.800	.424
c*d	.041	.033	.340	1.243	.215

*: p<.05, **: p<.01, ***: p<.001

As shown in <Table 11> and <Table 12>, as a result of regression analysis ($\Delta R^2 = .000$) of interaction, with moderation factor of obsessive enthusiasm, of two stage regression equation between dependence variable of deindividuation among burnout and work environment, has not been increased and that F increment did not turn out to be significant ($\Delta F .040, p<.01$).

To test moderation role of obsessive enthusiasm, three stage regression analysis with all independent variables and interaction of moderation factor was performed, and it turned out that stage three ($R^2 = .339, p<.01$) did not turn out of to be significant and R^2 ($\Delta R^2 = .004$) has been increased with insignificant increment ($\Delta F .782, p<.05$). Therefore, the analysis result was rejected.

Table 13: Statistics on Moderation Effect of Obsessive Enthusiasm between Work Environment and Burnout (Emotional Deprivation)

Model	R	R-Square	Corrected R-Square	Estimated Value of Standard Error	Statistics Variation				
					R-Square Variation	F Variation	df1	df2	Significance Probability F Variation
1	.535	.287	.281	.94402	.287	55.324	3	413	.000***
2	.539	.290	.283	.94282	.004	2.054	1	412	.153
3	.571	.326	.315	.92206	.036	7.255	3	409	.000***

*: p<.05, **: p<.01, ***: p<.001

Table 14: Moderation Role of Obsessive Enthusiasm between Work Environment and Burnout (Emotional Deprivation)

Factors	Non-Standardized Coefficient		Standardized Coefficient	t	Significance Probability
	B	Standard Error	Beta		
(constant)	1.185	1.440		.823	.411
Welfare Environment (a)	.140	.196	.142	.718	.473
Personal Environment (b)	.391	.241	.344	1.620	.106
Institution Environment (c)	-.165	.187	-.148	-.886	.376
Obsessive Enthusiasm(d)	.095	.316	.144	.301	.763
a*d	-.016	.039	-.161	-.405	.686
b*d	-.093	.051	-1.000	-1.817	.070
c*d	.154	.038	1.114	4.004	.000***

*: p<.05, **: p<.01, ***: p<.001

As shown in <Table 13> and <Table 14>, as a result of regression analysis ($\Delta R^2 = .004$) of interaction, with moderation factor of obsessive enthusiasm, of two stage regression equation between dependence variable of emotional deprivation among burnout and work environment, has not been increased and that F increment did not turn out to be significant ($\Delta F 2.054, p<.05$).

To test moderation role of obsessive enthusiasm, three stage regression analysis with all independent variables and interaction of moderation factor was performed, and it turned out that stage three ($R^2 = .326, p<.01$) turnout of to be significant and R^2 ($\Delta R^2 = .036$) has been increased with significant increment ($\Delta F 7.255, p<.01$). Therefore, the analysis result was partially accepted.

5. Conclusion

5.1. Summary of Research Results

The current study attempts to enhance competitiveness by improving Chinese restaurant chefs' work environment and analyzes its effect on work environment and burnout. Also, this study analyzes the see if there is moderation role of enthusiasm between work environment and burnout. The following is the summary of the result: First, to test <Hypothesis 1>, analysis on effect of work environment on loss of accomplishment among burnout was performed and it turned out that welfare environment, personal environment, and institution environment had significantly positive (+) effect.

Second, to test <Hypothesis 2>, analysis on effect of work environment on deindividuation among burnout was performed and it turned out that welfare environment, personal environment, and institution environment had significant effect.

Third, to test <Hypothesis 3>, analysis on effect of work environment on emotional deprivation among burnout was performed and it turned out that while welfare environment and institution had significant effect while personal environment did not.

Fourth, to test <Hypothesis 4>, analysis on influencing relationship between work environment and burnout with moderation role of obsessive enthusiasm was performed. As for the result, (1) as a result of regression analysis on interaction between work environment and obsessive enthusiasm, moderation factor, with dependent variable of loss of accomplishment, it was partially accepted. (2) as a result of regression analysis on interaction between work environment and obsessive enthusiasm, moderation factor, with dependent variable of deindividuation, it was rejected. (3) as a result of regression analysis on interaction between work environment and obsessive enthusiasm, moderation factor, with dependent variable of emotional deprivation, it was partially accepted.

5.2. Implications

5.2.1. Academic Implications

Academic implications of the current study are as following:

First, it is considered meaningful verifying that enthusiasm plays a moderating role on effects of work environment on burnout. Reliability and validity were tested using measuring variables extracted from prior studies of Moll (1991), Heo (2009), Kim (2011), Park, Nah, & Kim (2011), Lee (2015, 2016), and Park and Yoon (2014). As a result of testing, there was consistency. Therefore, it implies that research model and measuring variables can be theoretical foundations for future studies.

Second, based on prior studies, there were not studies on effect of enthusiasm on Chinese restaurant chef's burnout even though there have been various studies on Chinese restaurant chef, and this implies that the current study differs from existing studies. Especially, as there have been prior studies on work environment, the current study has improved existing theory or expanded it by adding more variables.

Third, the current study verified moderation role of enthusiasm (obsessive enthusiasm) between work environment and burnout. Also, in several hypotheses testing on Chinese restaurant's chef, it implies that there is influential relationship. The current study is considered that it contributed in improving and expanding theory related to work environment.

5.2.2. Practical Implications

Based on above test results, following practical implications were extracted.

First, to test <Hypothesis 1>, analysis on effect of work environment on loss of accomplishment among burnout was performed and it turned out that welfare environment, personal environment, and institution environment had significant effect. This implies that Chinese restaurant chefs' work environment is poor, especially institution environment. As Chinese restaurants have poor institution environment compared to other restaurants, it is considered that there should be improvement on institution environment so that Chinese chefs could work in good work environment.

Second, to test <Hypothesis 2>, analysis on effect of work environment on deindividuation among burnout was performed and it turned out that welfare environment, personal environment, and institution environment had significant effect. This implies that deindividuation is taking place among Chinese restaurant chefs, especially in welfare environment. This implies that Chinese restaurants have poor welfare facilities. If welfare facility is not

improved, Chinese restaurant chefs' work environment would get works. There should be an effort to improve welfare facility so that Chinese restaurant chefs could work in good work environment.

Third, to test <Hypothesis 3>, analysis on effect of work environment on emotional deprivation among burnout was performed and it turned out that while welfare environment and institution had significant effect while personal environment did not. This implies that institution environment has that greatest influence on Chinese restaurant chef's emotional deprivation, and it needs urgent improvement. As Chinese restaurants have poor institution environment compared to other restaurants, it is considered that there should be improvement on institution environment so that Chinese chefs could work in good work environment.

Fourth, to test <Hypothesis 4>, analysis on influencing relationship between work environment and burnout with moderation role of obsessive enthusiasm was performed. As for the result, (1) as a result of regression analysis on interaction between work environment and obsessive enthusiasm, moderation factor, with dependent variable of loss of accomplishment, it was partially accepted. It implies that personal environment has the greatest effect on Chinese restaurant chefs' loss of accomplishment, especially when coworkers and superiors are under obsession. Harmonious atmosphere is emphasized as personal environment and obsessive enthusiasm has effects on loss of accomplishment. (2) As a result of regression analysis on interaction between work environment and obsessive enthusiasm, moderation factor, with dependent variable of deindividuation, it was rejected. This means that obsessive enthusiasm has no effect on Chinese restaurant chefs' deindividuation. It can be said that obsessive enthusiasm has no connection with Chinese restaurant chefs' work environment. It implies that there would be no effect of maintaining the current welfare environment, personal environment, or institution environment. (3) As a result of regression analysis on interaction between work environment and obsessive enthusiasm, moderation factor, with dependent variable of emotional deprivation, it was partially accepted. This implies that Chinese restaurant chefs' work environment is poor, especially institution environment and that it has vast effect on Chinese restaurant chefs' emotional deprivation. Therefore, it implies that emotional stability enhances Chinese restaurant chefs' enthusiasm.

5.3. Limitations and Future Research Project

The current study analyzes effect of Chinese restaurant chefs' work environment on burnout. Although it has some aforementioned academic and practical implications as a study for moderation role of enthusiasm and self-consciousness, there are some limitations as well. The following are limitations and directionality of future research:

First, as for sampling, the sample is limited to one region. Therefore, there is limitation to generalize the result to all Chinese restaurant chefs. To overcome this limitation, a study with various restaurants, such as Japanese and American restaurant, chefs is needed.

Second, this study utilized cross-sectional approach. For future studies, longitudinal approach should be utilized to study effect on work environment and burnout of Chinese restaurant chefs.

Third, there is manpower shortage due to poor work environment of Chinese restaurant. Studies that are not limited to work environment are needed to more efficiently utilize human resources.

Based on limitations and suggested directionalities for future studies, there should be multilateral and in-depth study.

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