# Relationship of occupational stress and psychosocial stress to health promotion behavior in female office workers and emotional labor workers for sales

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#### <Abstract>

Objectives: The aim of this study was to evaluate the relationship of occupational stress and psychosocial stress to health promotion behaviors depending on characteristics of female office workers and emotional labor workers for sales. Methods: A survey of 207 female service workers engaging in sales of cosmetics in major department stores and 149 females working in the offices of cosmetics companies was carried out using a self-administered questionnaire. Results: It showed a significant difference in job demand and insufficient job control which are sub-domains of stress. The percentage of emotional laborers exposed to a high risk of psychosocial stress was higher than office workers. In office workers, occupational stress stemmed from insufficient job control and low reward of work was significantly related to psychosocial stress. But in emotional labor workers, stress from job insecurity, and organizational system were added. The relevant factors that affect health promotion behaviors were type of occupational stress, psychosocial stress, marital status, educational level and working career. Conclusions: Occupational stress and psychosocial stress were closely associated with health promotion behaviors. It was suggested that the development of health promotion programs which reduce the stress in female office and emotional labor workers.

Key words: female, office workers, emotional labor workers for sales, occupational stress, psychosocial stress, health promotion behavior

## T. Introduction

The number of working female population in South Korea has been increasing due to the highly developed industrial structures, urban centralization, the persistence of economic growth, the increased proportion of highly educated women, and high demands of society. According to the reports of Statistics Korea and Ministry of Gender Equality and Family in December 2014, the female economically active population were added up to 11,149,000, which was 347,000 more than previous years. It was reported that the female labor force participation rate in Korea has increased by 1.1 percent

year-on-year (Statistics Korea 2014).

This result indicates the proportion of economically active women out of the total female population has been expanded in its volume. However, women are more likely than men to be responsible for female role emphasizes caring, nurturance, and concern for other people and their well-being and thus are faced with a double dose of the strain of caring for others both at home and on the job (Maslach & Jackson, 1985). Especially, services industries where the majority of women are working in inquire emotionally demanding works that their own emotions have to be suppressed for others in order to practice display rules (Grandey, 2003). Hochschild coined the term emotional labor as

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'the management of feelings to create a publicly observable facial and bodily display', meaning that services workers control their images to be organizationally desired during interpersonal transactions (Hochschild, 1983). In this study, emotional labor refers to emotional dissonance and distress which service providers were experiencing while dealing with customers.

This kind of suppression becomes a source of stress and has a negative effect on both health and organizational outcomes (Maslach, 1982; Goolsby, 1992; Cords, & Dougherty, 1993; Morris, & Feldman, 1996). The excessive stress generated from the work can be expressed in physical symptoms such as fatigue, sleep disturbance, and indigestion. It can be also appeared in both psychological symptoms such as anxiety and depression, and social behaviors such as absenteeism, resignation and aggressive behaviors. It was known to be accompanied by a physiological state of arousal involving the endocrine system such as release of hormones and the autonomic nervous system such as increased heart rate, breathing, blood pressure, and skin conductance (Gross, 1989a; Gross, 1989b; Pennebaker, 1990; Steptoe, 1993). For the past 30 years or so, psychologists have found that emotions and the management of emotion are connected with health problems such as cancer and heart disease (Grandey, 2000).

Most of previous studies have been based on the general working population, identifying stress levels and practice levels of health promotion behaviors. There were not any studies directly comparing the stress level and health promotion behaviors of cosmetic sales emotional labor workers who have a huge amount of emotional work and female office workers. Considering existing research showed that health promotion behaviors such as drinking, smoking, eating habits, sleeping, exercise were closely related to the health status of adults (Cooper, 1989; Emmons, 1999; William, 2003), health promotion behaviors would not be carried out when individuals sense stress.

The aim of this study was to examine the occupational stress level, psychosocial stress level, and health promotion behaviors of both female office workers and emotional labor workers for sales, and to determine factors affect health promotion behaviors.

## II. Methods

#### 1. Definition of study subjects

Emotional labors were defined as cosmetic sale women and service providers dealing with various types of customers in department stores.

Office workers consisted of ones in marketing positions who were in charge of importing products and planning sales of products, ones in educational positions providing trainings for the way of talking to customers, ones in advertising positions who took charge of product advertisement, ones in sales positions who dealt with staff management in the department stores and the trade directly with the department stores, and ones in administration positions who administrated general work.

The subjects were 220 sales women who were working in the cosmetic department in L, H, and S department store and 200 female office workers working for E and L cosmetic company located in large city. The data were collected with structured self-answered questionnaire with obtaining written consents after explain the purpose. The study was conducted between 8<sup>th</sup> of April 2011 and 28<sup>th</sup> of April 2011, and 207 questionnaires from emotional labor workers and 151 from female office workers were collected. Among them, 2 were excluded from the study due to the lack of information and 356 (84.7%) were used to analyze the data. 58.1 % of the subjects were emotional labor workers and 41.8 % of the subjects were office workers.

This study was conducted under the approval of institutional review board (IRB) of C university hospital (CUMC11U022).

### 2. Study tools

#### 1) General and work related characteristics

Subjects completed questionnaires on their age, marital status, educational level, the current position, the department at work, total experience, the average working hours per day, and the presence of illness obtained.

#### 2) Occupational stress

In this study, we assessed occupational stress, using Korean Occupational Stress Scale - Short Form (KOSS-SF) 24 questionnaire devised by Chang et al (Park et al., 2009). The 7 categories of KOSS-SF used in this study follows: job demand, insufficient job control, inadequate social support, job insecurity, the organizational systems, lack of rewards, and occupational climate.

Each area was made to reply in 'not at all'(1), 'no'(2), 'yes'(3), and 'very much so'(4). As the score went up, it shows a respondent has higher work-related stress level. Each area was calculated in terms of 100 score. All scores of 7 areas were summed up and divided by 7 to calculate the total score of work-related stress.

#### Psychosocial stress

Psychosocial stress was designed by psychological and social conflicts of human beings stemmed from external threats or loss (Dohrenwend, 1978). PWI 45 questions, modified and supplemented from GHQ-60 suitable for Korean population, were shortened again to PWI-SF including 18 questions (Chang, 2000).

Four-level responses range from "always" to "not at all" with the score for each rated on a scale of 0-4 points, and total scores range from 0 to 54. Respondents with scores of less than 9, 9 to 27, and more than 27 were classified as a healthy group, a potential stress group, and a high stress group, respectively. In this study, the dependent variables were divided into two: the high risk group with the score greater than 27 and the low risk group with the score less than 27.

#### 4) Health promotion behaviors

The structured questionnaires devised by Walker (Walker, Sechrit, & Pender, 1987) were modified and supplemented to measure health promotion behavior in this study. The questionnaires consisted of 25 items: 5 eating habit areas, 4

exercise areas, 4 personal hygiene areas, 4 disease prevention areas, 4 interpersonal support areas, and 4 stress management areas. Each item was measured by a Likert scale given 5 (very much so) to 1 (not at all). Higher the score was better the practice level of health promotion behaviors.

#### 3. Analysis methods

SAS program (version 9.1) was used to analyze the data. The level of occupational stress, psychosocial stress and health promotion behaviors were compared using t-test and X2-test between emotional labor workers and office workers. The factors affecting health promotion behaviors were analyzed with stepwise Multiple linear Regression.

# III. Results

# 1. The general and work related characteristics of study subjects

59.5% of office workers were between 30-39 years old and 77.8% of emotional labor workers were between 20-29 years old. 50.3 % of office workers and 82.6% of emotional labor workers were living as single. More office workers (74.5%) than emotionally demands workers (7.3%) were university education. There were statistical significances in age, marital status, and educational level in both groups.

57.4% of office workers were deputy and the heads of the department, while 77.8% of emotional labor workers were general staffs. 63.8% of office workers and 26.1% of emotional labor workers had more than 5 years of working career. 42.3% of female office workers and 57.5% of emotional labor workers were working longer than 10 hours per day. Comparing the characteristics of the work of both groups, position, the working career and the working hours showed significant differences <Table 1>.

<Table 1> General and work-related characteristic of subjects

Variables	Category		workers 149(%)		abor workers 07(%)	$\chi^2$	p-value
Age (years)	20-29	44	29.7	161	77.8	8.633	< 0.001
	30-39	88	59.5	43	20.8		
	Over40	16	10.8	3	1.5		
Marital status	Single	75	50.3	171	82.6		< 0.001
	Married	69	46.3	34	16.4		
	Others	5	3.4	2	1.0		
Education	High school	26	17.4	77	37.2	177.184	< 0.001
	College	12	8.1	115	55.6		
	University	111	74.5	15	7.3		
Position*	Junior	33	22.3	161	77.8	123.687	< 0.001
	Senior	85	57.4	17	8.2		
	Manager	31	20.3	29	14.0		
Working department	Marketing	25	16.8				
	Sales	26	17.5				
	PR	15	10.1				
	Training	17	11.4				
	Administration	66	44.3				
	S/C			108	47.8		
	M/U			99	52.2		
Working career (Years)	<1yr	22	14.8	39	18.8	54.734	< 0.001
	1-2yr	7	4.7	29	14.0		
	2-3yr	9	6.0	39	18.8		
	3-5yr	16	10.7	46	22.2		
	>5yr+	95	63.8	54	26.1		< 0.001
Working hours (Day)	8-9h	28	18.8	24	11.6	8.613	0.035
	9-10h	58	38.9	64	30.9		
	>10h	63	42.3	119	57.5		
Illness	Yes	31	20.8	40	19.3		0.730
	No	118	79.2	167	80.7		

S/C : skincare consultation and sales job

M/U: makeup service and sales job

Position\* Manager level : counter manager ( emotional labor group )
deputy general manager or above ( office worker group )
Senior level : assistant manager (emotional labor group )

assistant manager or manager ( office worker group )

Junior level: general employee

#### 2. Work-related stress and psychosocial stress

There was no significant difference in the mean total values of stress level between office workers and emotional labor workers except job demands and insufficient job control. Mean score of job demand in office workers was significant higher than emotional labor workers, while insufficient job control of emotional labors was higher than official workers.

With regard to psychosocial stress, 55.6% of emotional labor workers and 35.6% of female office workers reported

having a high risk of psychosocial stress. Emotional labor workers had significantly higher risk of psychosocial stress than office workers (Table 2).

In office workers, occupational stress stemmed from insufficient job control and low reward at work was significantly related to psychosocial stress. In emotional labor workers, occupational stress due to job demands, insufficient job control, job insecurity, organization system, and lack of rewards were highly related to psychosocial stress <Table 3>.

< Table 2> Comparison of occupational stress and psychosocial stress in female office and emotional labor workers for sales

Catalan	Office workers	Office workers Emotional labor workers			
Category	N=149	N=207	t/ x²	p-value	
Occupational stress					
Job demand	68.2±15.8	59.2±15.3	5.409	0.001	
Insufficient job control	43.0±14.6	$49.6 \pm 16.7$	-3.849	0.001	
Inadequate social support	31.8±13.1	33.7±12.9	-1.300	0.205	
Job insecurity	35.5±20.3	33.9±21.1	0.701	0.58	
Organizational system	44.9±13.3	43.8±15.5	0.715	0.294	
Lack of reward	43.3±16.4	44.6±17.0	-0.750	0.648	
Occupational climate	33.1±14.3	$34.5 \pm 16.9$	-0.862	0.335	
Γotal	$42.8 \pm 8.4$	42.7±10.6	0.074	0.9	
Psychosocial stress	N(%)	N(%)			
Low risk	96(64.4%)	92(44.4%)	13.885	0.001	
High risk	53(35.6%)	115(55.6%)			

< Table 3> Relationship of occupational stress and psychosocial stress to female office workers and emotional labor workers for sales

Ps	Psychosocial Office workers			Emotional labor workers					
	tress	N=	:149	$\chi^2$	p-value	N=	207	$\chi^2$	p-value
Occupational stress		Low risk	High risk			Low risk	High risk		
Job demand	Low	60(67.4)	29(32.6)	0.860	0.354	82(50.0)	82(50.0)	0.960	0.002
	High	36(60.0)	24(40.0)			10(23.3)	33(76.7)	9.869	
Insufficient job control	Low	75(70.8)	31(29.2)	6.412	6.412 0.001	70(53.8)	60(46.2)	12.511	< 0.001
	High	21(48.8)	22(51.2)			22(28.6)	55(71.4)		
Inadequate Job control	Low	23(62.2)	14(37.8)	0.110	0.74	21(56.8)	16(43.2)	2.766	0.096
	High	73(65.2)	39(34.8)			71(41.8)	99(58.2)	2.766	
Job insecurity	Low	25(73.5)	9(26.5)	1.500	1.592 0.207	39(70.9)	16(29.1)	21.246	< 0.001
	High	71(61.7)	44(38.3)	1.592		53(34.9)	99(65.1)		
Organizational system	Low	57(68.7)	26(31.3)	1 450	0.225	68(55.7)	54(44.3)	15046	< 0.001
	High	39(59.1)	27(40.9)	1.473	1.4/3	24(28.2)	61(71.8)	15.346	
Lack of reward	Low	56(83.6)	11(16.4)	19.486	< 0.001	58(66.7)	29(33.3)	20.01.5	< 0.001
	High	40(48.8)	42(51.2)			34(28.3)	86(71.7)	30.015	
Occupational climate	Low	86(66.7)	43(33.3)	2.099	0.147	78(47.9)	85(52.1)	2 (00	0.058
-	High	10(50.0)	10(50.0)			14(31.8)	30(68.2)	3.608	

Occupational Stress category variables dichotomized based on upper tertile point(67%)

< Table 4> Comparison of health promotion behaviors in female office workers and emotional labor workers for sales

Health promotion behavior	Office workers N=149	Emotional labor workers N=207	t	p-value
Eating habit	3.0±0.7	2.4±0.7	7.749	< 0.001
Exercise	1.9±0.8	$1.8 \pm 0.8$	0.715	0.478
Personal hygiene	$3.9 \pm 0.6$	3.9±0.7	0.670	0.565
Disease prevention	$3.4{\pm}0.6$	3.1±0.7	4.207	< 0.001
Interpersonal support	3.8±0.5	$3.6 \pm 0.6$	2.977	0.002
Stress management	3.3±0.6	3.0±0.8	3.621	0.002

<Table 5> Factors affecting health promotion behaviors

Variable		Referent value	Estimate	t	p-value	
Eating habit	Type of job	Emotional labor worker vs Office worker(ref)	-0.275	-2.997	0.003	F=15.164
	Occupational stress		-0.006	-1.417	0.157	$R^2 = 0.306$
	Psychosocial stress		-0.016	-3.495	<.001	P=0.001
	Marital status	Married vs non-married(ref)	0.368	3.851	<.001	
	Age	30-39 vs 20-29(ref)	0.189	1.754	0.080	
		Over40 vs 20-29(ref)	0.074	0.374	0.709	
	Position	Senior vs Junior(ref)	0.172	1.483	0.139	
		Manager vs Junior(ref)	0.026	0.200	0.842	
	Working career	$\geq 2$ yr vs $\leq 2$ yr(ref)	-0.218	-2.438	0.015	
	Illness	No vs Yes(ref)	-0.225	-2.563	0.011	
Exercise	Type of job	Emotional labor worker vs Office worker(ref)	0.089	0.663	0.508	F=4.871
	Occupational stress		-0.010	-1.967	0.050	$R^2 = 0.089$
	Psychosocial stress		-0.015	-2.682	0.008	P=0.001
	Education	High school vs university(ref)	-0.300	-2.259	0.025	
		College vs university(ref)	-0.039	-0.282	0.778	
	Age	30-39 vs 20-29(ref)	-0.043	-0.417	0.677	
		Over40 vs 20-29(ref)	0.304	1.479	0.140	
Personal	Type of job	Emotional labor worker vs Office worker(ref)	-0.036	-0.501	0.617	F=3.104
hygiene	Occupational stress		-0.007	-1.804	0.072	$R^2 = 0.034$
	Psychosocial stress		-0.005	-1.137	0.256	P=0.016
	Working hours	>9h vs 8-9h(ref)	0.176	1.796	0.073	
Disease	Type of job	Emotional labor worker vs Office worker(ref)	0.033	0.305	0.761	F=7.294
prevention	Occupational stress		-0.000	-0.092	0.927	$R^2 = 0.128$
	Psychosocial stress		-0.013	-2.772	0.006	P=0.001
	Marital status	Married vs non-married(ref)	0.176	2.025	0.044	
	Education	High school vs university(ref)	-0.391	-3.542	<.001	
		College vs university(ref)	-0.288	-2.488	0.013	
	Working career	$\geq 2$ yr vs $\leq 2$ yr(ref)	0.161	1.890	0.060	
Interpersonal	Type of job	Emotional labor worker vs Office worker(ref)	-0.140	-2.275	0.024	F=12.349
support	Occupational stress		-0.008	-2.338	0.020	$R^2 = 0.124$
	Psychosocial stress		-0.014	-3.558	<.001	P=0.001
	Working hours	>9h vs 8-9h(ref)	0.171	2.045	0.042	
Stress	Type of job	Emotional labor worker vs Office worker(ref)	0.180	2.051	0.041	F=36.543
management	Occupational stress		-0.010	-2.863	0.004	$R^2 = 0.515$
	Psychosocial stress		-0.047	-12.501	<.001	P=0.001
	Marital status	Married vs non-married(ref)	0.187	2.444	0.015	
	Education	High school vs university(ref)	-0.183	-2.099	0.037	
		College vs university(ref)	-0.267	-2.941	0.003	
	Age	30-39 vs 20-29(ref)	0.151	1.972	0.049	
		Over40 vs 20-29(ref)	0.212	1.439	0.151	
	Working career	$\geq 2$ yr vs $\leq 2$ yr(ref)	-0.183	-2.650	0.008	
	Working hours	>9h vs 8-9h(ref)	0.149	1.855	0.064	

#### 3. Health promotion behaviors

Among the subcategories of health promotion behaviors, office workers obtained better scores than emotional labor workers in the eating habits, the disease prevention, the interpersonal support, and the stress management. There was a non-significant trend towards personal hygiene and exercise for both groups <Table 4>.

Occupational stress, psychosocial stress, marital status, and education levels had an effect on promoting health behaviors. The higher the occupational stress and psychosocial stress were the lower the practice of health promotion behaviors. Married women showed the higher practice of health promotion behaviors than single women. University graduates showed the higher practice of health promotion behaviors than high school or college graduates. The type of job was associated with eating habit, interpersonal support, and stress management of health promotion behaviors. Working career had negative association with management of health promotion behaviors <Table 5>.

## V. Discussion

This study was conducted to examine the occupational stress and psychosocial stress of office workers working at cosmetic companies and emotional labor workers selling cosmetics in department stores, and to explore their health promotion behaviors related to their stress levels and influential factors.

The results showed that there was no difference between the absolute values for stress level of office workers and emotional labor workers, but there were significant differences in the subcategories of stress. Office workers were mainly distressed by work demands, whereas emotional labor workers were highly overwhelmed by the lack of autonomy. This result was concordance to the previous study (Pugliesi, 1999) reporting that service workers were less distressed in terms of work demands and were more distressed in terms of autonomy at work comparing to other jobs. Work-related stress is not necessarily associated to the number of tasks or scope of responsibility, but rather to the level of autonomy or power the employ has (Andrews, Karcz, & Rosenberg, 2008).

Job autonomy is found to precede emotional labor and determines its duration and frequency; it supports each encounter between service provider and customer. In contrast to non-professionals, professionals have more autonomy to engage or disengage their clients emotionally (Huynh, Alderson, & Thompson, 2008). Office workers could be distressed by the capacity required for the position because they were in charge of the sales and marketing planning, education, and advertisements. Emotional labor workers also could be highly distressed by the lack of autonomy at work, since they have to deal with customers with various characters and meet the demand from department stores connected to the profits to the quality of service provided by the staff directly and also have to be blindly compliant with strict policies of the companies they belong to.

Emotional labor is mainly dictated by organizational rules, as suggested by management scholars (Chu, 2004; Grandey, Fisk, & Steniner, 2005). Organizations provide workers with scripted client interaction, thus controlling expression of their interpersonal emotions (Grandey, Kern, & Frone, 2007). Moreover, most known studies on customer verbal abuse have focused on emotional labor occupations (Hochschild, 1983) where customer contact is frequent and emotional expectations are high, such as caring occupations and service occupations (Grandey, Kern, & Frone, 2007).

There was a positive association of psychosocial stress level with 7 different areas of job stress. Identical to the previous research (Bultmann, 2002), especially the correlation between the stress due to autonomy and insufficient compensation at work and the psychosocial stress was commonly shown in both groups.

In terms of the practice level of health promotion behaviors, office female workers obtained better scores in eating habit, disease prevention, interpersonal relationships management, and stress management. There was no significant difference in the exercise between the groups, but their mean values were lower than the other subcategories indicating the lowest level in health promotion behaviors. The eating habits and disease prevention areas of emotional labor workers showed the lower level of health promotion behaviors. The reason for this was thought to be stemmed from inflexible working hours at department stores rather than the sheer volume of workload of absolute working hours.

Interpersonal relationship management of emotional labor workers also showed the low practice level of health promotion behavior which was directly related to the higher risk of psychosocial stress than office workers. Comparing health promotion life style of emotional labor workers with hair dressers (Toerie, 2007) or nurses (Grandey, 2002) which belong to the same category of works, it was acknowledged that both of exercise areas were still low but stress management area was especially lower than the other emotional labors (Duffy, 1993) which needed paying attention.

The powerful influential factors affecting health promotion behaviors of both office workers and emotional labor workers were occupational stress, psychosocial stress, marital status and education status. When these factors were adjusted, the type of work was identified as non-influential factor to health promotion behavior. Rothman (Rothman, 1975) reported that overall life style was better when the subjects were older, married, attained higher education, had a better salaries and religion. Krip et al (Kripe, Simons, Garfinkel, & Hammond, 1979) also reported that the subjects had a better life style when they got higher education which was identical to the result of this study. This was thought to be that more educated people had better financial status and more time in their lives. Also, married life had more emotional stability and support within the family inducing higher interests in their own health and diseases.

The tendency of that the practice level of health promotion behaviors became less as the occupational stress and psychosocial stress became higher was shown in both office workers and emotional labor workers and this was identical to the previous studies conducted with local population (Siegrist, 2006), some high school teachers (Steptoe, 1996), general working population (Umberson, 1992), some of hospital workers (Mosadeghrad, 2011), pharmacists working in newly open pharmacy.

For the intervention of stress management, Cox (1993) suggested that prevention and exposure to hazard by design and worker training to reduce stress, timely reaction based on group problem solving to improve the organization's ability to recognize and rehabilitation offering enhanced support to help workers cope with and recover from problems which exist. Also Varvogli & Darviri (2011) reported that stress management program included, progressive muscle relaxation, relaxation response, emotional freedom technique, transcendental meditation, cognitive behavioral therapy, mindfulness-based stress reduction would be necessarily.

The limitations of this study were the subjects were only the staff of some of companies and the research results couldn't be generalized the total population of office female workers and emotional labor workers. For this reason, the results in this study should be supplemented with bigger samples and panels. The causal relationship between explanatory variables and dependent variables couldn't be explained sufficiently as this study was conducted as a cross-sectional study. The influential socio-psychological factors identified in previous studies such as the satisfaction level of work, self-efficacy, social supports were not examined.

Nevertheless, this study provided fundamental data to develop appropriate health promotion programs suitable for each group by identifying the occupational stress level, the psychosocial stress level, practice level of health promotion behavior and the influential factors affecting health promotion behavior of each group.

## IV. Conclusion

The occupational stress and psychosocial stress of office female workers and emotional labor workers has a negative correlation to the practice level of health promotion behavior and aggressive stress management methods lowering occupational stress and psychosocial stress in order to increase the practice

level of health promotion behaviors in the future. Autonomy should be increased and compensation system should be supplemented to lower occupational stress and psychosocial stress or providing information about exercise and exercise promotion programs will be beneficial to improve the exercise area where the both groups didn't do well. Especially, consultation and education about interpersonal relationships for was expected to be the positive method to lower their psychosocial stress.

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