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## **Factors Affecting Career Stress of Medical Staff at Hospitals in Ho Chi Minh City**

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### **Abstract**

This study tests the theoretical model between factors affecting the occupational stress of hospital staff. From the obtained results, the study provides managerial implications to reduce the occupational stress of staff at hospitals in Ho Chi Minh. The thesis used a qualitative research method combined with quantitative research. Qualitative research method (group discussion) to adjust and supplement the scale of research concepts. A quantitative research method to test reliability, allowable value, test research hypothesis by multivariable linear regression analysis method. The results show that the time pressure factor has a positive relationship with the occupational stress of employees ( $\beta = 0.369$ ;  $p = 0.000 < 0.01$ ) at the 99% confidence level. Next,

work pressure positively correlates with occupational stress ( $\beta = 0.157$ ;  $p = 0.014 < 0.01$ ) at the 95% confidence level. Next, superior pressure positively correlates with occupational stress ( $\beta = 0.184$ ;  $p = 0.003 < 0.01$ ) at the 99% confidence level. Next, the factor of working conditions has a positive relationship with occupational stress ( $\beta = 0.134$ ;  $p = 0.053 < 0.1$ ) at the 90% confidence level. Finally, the co-worker relationship has a positive relationship with employees' occupational stress ( $\beta = 0.208$ ;  $p = 0.001 < 0.01$ ) at the 99% confidence level. The research results give Le Loi hospital leaders meaning in reducing occupational stress. Finally, some limitations and directions for further research are mentioned in the thesis.

**Keywords:** Work Pressure (WP), Superiority Pressure (SP), Co-Worker Relationship (CR), Time Pressure (TP), Working Conditions (WC), Occupational Stress (OS)

### **Introduction**

Occupational stress is defined as an imbalance between requirements and ability to work. Many assessments of the effects of occupational stress have been conducted (Sara *et al.*, 2018; Lihm *et al.*, 2012; Guimont *et al.*, 2006; Skirrow & Hatton, 2007), and the results show that Occupational stress not only affects the health, life and work of the employees themselves but also dramatically affects the employers' organizations, mainly in terms of revenue.

Indeed, the effects of occupational stress on health are fatigue, anxiety, depression (Sara *et al.*, 2018), job dissatisfaction, reduced work quality, alcoholism, high sick days, early retirement, and several stress-related illnesses such as stomach ulcers (Lihm *et al.*, 2012), myocardial infarction (Habibi *et al.*, 2015), hypertension (Guimont *et al.*, 2006).

In addition, studies by (Hatton *et al.*, 2001; Skirrow & Hatton, 2007) also show that a significant correlation exists between occupational stress and the turnover of employers' organizations, found that the higher the job stress level of workers, the lower the sales per employee that the service organizations earn per employee, resulting in a sharp decline in the total revenue of the entire organization.

Understanding the urgency of the issues surrounding the current state of occupational stress in the medical profession in Vietnam today and in the process of working at the hospital, the author observes the pressure and fatigue of each person. Medical staff are working daily around the author.

From the theoretical basis mentioned above, the study "Factors affecting occupational stress of medical staff at Hospitals in Ho Chi Minh City" must be carried out.

### **Theoretical basis**

#### **Occupational stress**

Stress is the body's nonspecific biological response to stressful situations. These are reactions aimed at restoring homeostasis, overcoming adverse situations to ensure adequate maintenance and adaptation of the organism to ever-changing living conditions. When a person loses the ability to adapt, stress can kick in, and the person gets sick.

The psychological and cognitive processes involved in stress responses have also been identified. Richard Lazarus, around 1966 developed a theory of how people deal with stressful situations (Benoliel *et al.*, 1990)<sup>[3]</sup>. Like Selye, he believes that each

person's exposure to stressful situations is different and depends a lot on one's situational perception. He argues that stress emerges as an imbalance in demand and response resources.

Leka *et al.* (2003) gave the following definition of occupational stress: Occupational stress is defined by a series of reactions that occur when workers are faced with a disparity between job demands and job demands—their work, knowledge, skills and abilities.

### Factors affecting the stress of medical staff:

- Causes at work: According to many studies on the stress of health workers: high-risk work, frequent job changes, care and management of too many patients, shortage of human resources, under much pressure creating not only a rich and dangerous working environment but also a stressful working environment, unsafe and inappropriate working conditions, high-risk jobs, High workload are factors that contribute to stress for health workers.

- In terms of organization: unreasonable work arrangement, unclear work assignments, monotonous work, ineffective management from superiors, and having to do many things simultaneously. I need to receive adequate professional training. For a working time such as shift night shift, I often have to work overtime, do not have enough time to rest, the pressure is close to the deadline to complete the work, and do not have enough time to complete the mission. Career development needs to be commensurate; the community needs to appreciate and learn more about their work, the social position needs to be respected compared to their contributions, and there are few opportunities for promotion.

- Causes of relationships in the workplace: factors that have contributed to stress for health workers are job characteristics that must be explained to many people, harassment or discrimination, relationships Not good with co-workers.

- Causes from the physical environment at work: Factors that have contributed to stress for health workers are noise, clutter, overheating, lack of equipment, overcrowding, lack of ventilation, lack of light and dust.

- Other causes: taking a long time to get to the office, lack of family finances, unhappy family life, having to travel a long and dangerous distance, health problems, spouse's health, children, problems in love affairs, bad relations with neighbours, friends.

Based on the DCS (Demand) - Control - Support model developed by Karasek *et al.* (1998) combined concerning customizations in the scale developed by (Hoang *et al.*, 2013) developed for the case of Vietnam Occupational stress in healthcare workers in this study is influenced by the following factors: work pressure, superior pressure, a co-worker relationship, pressure time force, working conditions.

According to many studies on the stress status of healthcare workers, work-specific factors that cause stress for healthcare workers such as high-risk jobs, frequent job changes, caregiving, etc. management of too many patients, shortage of human resources, much pressure... creating not only a rich and dangerous working environment but also a stressful working environment. Hypothesis H1 is proposed:

H1: Work pressure has a positive influence on the occupational stress of medical staff at Le Loi hospital

For relationships with superiors, there are factors such as a bad relationship with leaders, always criticized by superiors, blamed in cases of professional errors, doctors are not present when patients are agitated; superiors demand unreasonable requests, lack support from superiors, and receive little attention and encouragement from superiors. Hypothesis H2 is proposed:

H2: Superior pressure has a positive influence on the occupational stress of medical staff at Le Loi hospital

Factors that have contributed to the stress for healthcare workers are characteristics: The work must be explained to many people, harassed or discriminated against, and Bad relationships with colleagues. Hypothesis H3 is proposed:

H3: Bad co-worker relationship has a positive effect on the occupational stress of medical staff at Le Loi hospital

For a working time such as shift mode, many night shifts often have to work overtime, do not have enough time to rest; the pressure is close to the deadline to complete the work, and do not have enough time to complete the mission. Hypothesis H4 is proposed:

H4: Time pressure has a positive influence on the occupational stress of medical staff at Le Loi hospital

Unsafe and inappropriate working conditions, high-risk jobs, and high workloads stress healthcare workers. Hypothesis H5 is stated:

H5: Working environment has a positive influence on the occupational stress of medical staff at Le Loi hospital

### Methodology

Preliminary qualitative research: The thesis synthesizes the relevant theoretical basis (research concepts and previous studies) from the research objective. Research models, hypotheses and observed variables measuring the scale of research concepts are formed on that basis. The scale of the research concepts at this stage is called the draft scale 1. The research model is evaluated through the group discussion method to standardize the theoretical model, discover new factors and adjust, add scale for clarity, suitable for research context. Interview results were recorded, developed and adjusted to become a draft scale 2 to support preliminary quantitative research.

Quantitative preliminary study: Draft scale two was used to test interviews with 80 employees by convenient sampling. Quantitative preliminary study to evaluate Cronbach's Alpha reliability coefficient and EFA analysis. After this step, the scale is completed and used for formal quantitative research.

Official research:

Research data is carried out by the direct survey method, emailing questionnaires when survey subjects accept to participate. The purpose of this method is to evaluate the model's fit and test the research hypothesis using the OLS estimation model.

**Results**

**Table 1:** Sample

		Freq	(%)
Gender	Male	75	47%
	Female	85	53%
Academic level	undergraduate	75	47%
	graduate	83	52%
	postgraduate	2	1%
Work experience	Less than 3 years	30	19%
	From 3 to less than 5 years	45	28%
	From 5 years to less than 7	75	47%
	From 7 years or more	10	6%

Gender: There are 75 male employees (accounting for 47%), and 85 people are female (accounting for 53%).

Education level: 75 people under a university degree (accounting for 47%), a university with 83 people (accounting for 52%), and graduates with 2 people, accounting for 1%.

Working experience: 30 employees are working under 5 years (19%) and 45 people from 3 to 5 years (accounting for 28%). From 5 years to less than 7 years, there are 75 people, accounting for 47%. Finally, 10 employees are working for 7 years or more, accounting for 6%.

The EFA results for the scales affecting work motivation are presented in Table 2.

**Table 2:** Independent variable EFA results

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.869			
Bartlett's Test of Sphericity	Approx. Chi-Square	1829.024			
	df	153			
	Sig.	.000			
Components					
	1	2	3	4	5
TP1				.837	
TP2				.816	
TP3				.817	
WP1		.807			
WP2		.774			
WP3		.869			
WP4		.797			
SP1			.761		
SP2			.868		
SP3			.776		
SP4			.784		
WC1					.812
WC2					.800
WC3					.815
CR1	.882				
CR2	.872				
CR3	.860				
CR4	.895				

Note: (1) work pressure (WP), 2) superiority pressure (SP), 3) co-worker relationship (CR), 4) time pressure (TP), 5) working conditions (WC)

Table 2 shows the KMO value = 0.869 > 0.5 and the Sig value = 0.000 < 0.05. EFA results show 5 factors extracted at an eigenvalue of 1,111 >1 and cumulative variance of 77.131% > 50%. Thus, the extracted variance meets the requirements. The observed variables have satisfactory weights (> 0.5). Thus, the scale of factors affecting the occupational stress of employees reaches convergent and separate values.

EFA analysis for occupational stress scale: Table 3 shows the KMO value = 0.813 > 0.5 and the Sig value = 0.000 < 0.05. EFA results show that is 1 factor extracted at an eigenvalue of 3,384 > 1 and cumulative variance of 67.675% > 50%. Thus, the extracted variance meets the requirements. The observed variables measuring the occupational stress scale have satisfactory load weights (> 0.5). Thus, this scale meets the requirements of convergent and discriminant validity.

**Table 3:** Dependent variable EFA results

Items	Component	
	1	
OS1	.761	
OS2	.838	
OS3	.838	
OS4	.855	
OS5	.818	
Eigenvalues	3,384	
Cumulative	67,675	
KMO	0,813	
Bartlett test	$\chi^2$	433,661
	df	10
	Sig	0,000

Note: Occupational Stress (OS)

After testing the sample of 160 employees with SPSS 25 software, most of the scales mentioned in the theoretical model met the requirements of reliability, discriminant value and convergent value. Therefore, these observed variables were used in the subsequent correlation analysis.

**Table 4:** Peason correlation

		CTNN	ALTG	ALCV	ALCT	DKLV	QHDN
OS	Pearson Correlation	1	.616**	.471**	.482**	.550**	.506**
	Sig. (2-tailed)		.000	.000	.000	.000	.000
	N	160	160	160	160	160	160
TP	Pearson Correlation	.616**	1	.308**	.296**	.507**	.369**
	Sig. (2-tailed)	.000		.000	.000	.000	.000
	N	160	160	160	160	160	160
WP	Pearson Correlation	.471**	.308**	1	.425**	.466**	.291**
	Sig. (2-tailed)	.000	.000		.000	.000	.000
	N	160	160	160	160	160	160
SP	Pearson Correlation	.482**	.296**	.425**	1	.390**	.334**
	Sig. (2-tailed)	.000	.000	.000		.000	.000
	N	160	160	160	160	160	160
WC	Pearson Correlation	.550**	.507**	.466**	.390**	1	.407**
	Sig. (2-tailed)	.000	.000	.000	.000		.000
	N	160	160	160	160	160	160
CR	Pearson Correlation	.506**	.369**	.291**	.334**	.407**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	
	N	160	160	160	160	160	160

\*\* . Correlation is significant at the 0.01 level (2-tailed).

The results of Table 4 show that factors are independent variables such as 1) work pressure, 2) superior pressure, 3) co-worker relationship, 4) time pressure, 5) working conditions have a positive relationship with employee occupational stress. The details are presented as follows: The time pressure factor has a mean and positive relationship with occupational stress (r = 0.616, p < 0.01). Next, the factor of work pressure has a positive relationship with occupational stress (r = 0.471, p < 0.01). Next, the factor of superior pressure has a positive relationship with occupational stress (r = 0.482, p < 0.01), the factor of

working conditions has a positive relationship with occupational stress: ( $r = 0.550, p < 0.01$ ). Finally, the co-worker relationship factor has a weak and positive relationship with occupational stress ( $r = 0.506, p < 0.01$ ).

**Table 5:** ANOVA<sup>a</sup>

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	85.415	5	17.083	40.640	.000 <sup>b</sup>
Residual	64.733	154	.420		
Total	150.148	159			

The analysis results in Table 5, it shows that Sig (F) = 0.00 < 0.05 and total R2 are all different from 0. This proves that hypothesis H0 has been rejected and hypothesis H1 accepted. So, the estimated model is suitable for the survey data.

**Table 6:** Model Summary<sup>b</sup>

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.754 <sup>a</sup>	.569	.555	.64834	1.917

Table 6 also shows the correlation results of adjacent errors (sequential autocorrelation) with Durbin-Watson value = 1.917, and this value ranges from 1 to 3 (empirical principle); this shows that the error parts are not most strongly correlated with each other in the model (the model does not suffer from autocorrelation).

The author performed the multicollinearity test to test the correlation between the independent variables in the regression model. The results of the multicollinearity analysis in Table 7 are as follows:

Evaluation of the multicollinearity of the multivariable regression model from the research results in Table 7 showed that the exaggerated variance values (VIF) of the independent variables ranged from 1.303 to 1.682. Thus, these VIF values are all less than the allowable threshold of 5 (Hair *et al.*, 2017). Therefore, the estimated model does not suffer from multicollinearity, and the independent variables do not have a linear relationship with each other. The level of explanation of the independent variables on the dependent variable is reliable.

**Table 7:** Regression results

Model	Unstandise estimate		Standise estimate	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	-.718	.295		2.431	.016		
1 TP	.378	.065	.369	5.850	.000	.705	1.419
WP	.173	.069	.157	2.495	.014	.708	1.412
SP	.218	.073	.184	3.002	.003	.743	1.345
WC	.137	.070	.134	1.947	.053	.595	1.682
CR	.219	.064	.208	3.447	.001	.768	1.303

a. Dependent Variable: OS

The results show that the time pressure factor has a positive relationship with the occupational stress of employees ( $\beta = 0.369; p = 0.000 < 0.01$ ) at the 99% confidence level. Next, work pressure positively correlates with occupational stress ( $\beta = 0.157; p = 0.014 < 0.01$ ) at the 95% confidence level. Next, superior pressure positively correlates with occupational stress ( $\beta = 0.184; p = 0.003 < 0.01$ ) at the 99%

confidence level. Next, the factor of working conditions has a positive relationship with occupational stress ( $\beta = 0.134; p = 0.053 < 0.1$ ) at the 90% confidence level. Finally, the co-worker relationship has a positive relationship with employees' occupational stress ( $\beta = 0.208; p = 0.001 < 0.01$ ) at the 99% confidence level.

Results R2 adjusted by 56.9% means that the level of explanation of the independent variables (1) work pressure, 2) superior pressure, 3) co-worker relationship, 4) time pressure, 5) working conditions) to 56.9% of the variance in occupational stress. The level of explanation through the adjustment coefficient more significant than 50%, according to Hair *et al.* (2017), is rated as high.

**Conclusion**

The results of the measurement model section show that, after adjusting and supplementing, the scales are reliable and satisfy the allowed values. Research results show that the components in the model include: (1) work pressure, 2) superior pressure, 3) co-worker relationship, 4) time pressure, 5) conditions work, 6) occupational stress. The contributions of the above results are shown below:

About research methods: The research results have added to the scale system of research concepts worldwide by supplementing in the Vietnam market. This will help applied researchers conduct their research in the Vietnamese market. Researchers can use, adjust and add scales in their research. According to the research results, (1) the work pressure scale has 4 observed variables, 2) the superior pressure scale has 4 observed variables, 3) the time pressure scale has 3 observed variables, 4) the Colleague relationship scale has 4 observed variables, 5) working condition scale has 3 observed variables.

Regarding research in the field of behaviour: The results of the measurement model in this study contribute to promoting researchers in the field of behavioural science in general as well as in the service sector in particular. This study must evaluate the validity and reliability when using them to measure.

The test results show that the theoretical model fits the market data. The research hypotheses proposed in this study are accepted and have important implications for Le Loi Hospital.

Finally, the theoretical model adds to the theoretical system in the behavioural domain. Researchers can refer to research models for their research in different fields of activity. In each different field, relationship building is also different. This study was conducted only in the research space at Le Loi Hospital. The results show a positive and statistically significant relationship between the components in the theoretical model. Furthermore, this study uses a convenience sampling method. Therefore, the ability to generalize the study results will be higher if it is repeated at some other hospitals. Therefore, the research direction is to repeat studies at other hospitals to generalize the results.

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