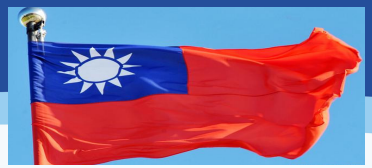
高雄醫學大學附設中和紀念醫院
Kaohsiung Medical University Chung-Ho Memorial Hospital.
服務 | 教學 | 研究



Job Stress and Burnout in Relation to Physical and Mental Health of Nurses in Southern Taiwan

Yueh-Li Yu, RN, MSN[1] Yao-Mei Chen, RN, PhD[2,3]
1.Department of Nursing, Kaohsiung Medical University Hospital, Kaohsiung Medical University, Kaohsiung, Taiwan
2.Department of Nursing, Kaohsiung Municipal Hsiaokang Hospital, Kaohsiung Medical University, Kaohsiung, Taiwan
3.College of Nursing, Kaohsiung Medical University , Kaohsiung, Taiwan

➢Background

Clinical nurses have encountered increasing workload and job stress due to the cost containment of the national healthcare insurance policies and the societal changes of patient demands.

➢Purpose

The purpose of this study was to explored the job stress and burnout in relation to physical and mental health of nurses in Southern Taiwan, as well as influence of job stress and burnout degree to physical and mental health.

➢Method

A cross-sectional survey was conducted at the medical center and the regional hospital in southern Taiwan using a convenience sample of 472 nurses(94.8% response rate). Data was collected in a structured questionnaire that included: a demographic inventory(personal and work-related characteristics), Effort-Reward Imbalance(ERI) questionnaire[2], Copenhagen Burnout Inventorye[1] (CBI), and General Health scale (GH). Through SPSS for Windows 19.0 software, descriptive statistics, bivariate analyses, chi-square test, Pearson correlation, and hierarchical regression analyses were used to analyze the data.

➢Result

Results indicate significant variances of different Personal background measures on job stress and burnout in relation to physical and mental health of nurses(Table1). The average score for physical-mental health was 45.69, with the highest mean score in the aspect of anxiety and insomnia(M=14.0), followed by somatic symptoms (M=13.41). This research found physical and mental health to be significantly associated with the effort-reward imbalance (r=. 383, p<.001), over–commitment (r=.443, p<.001), ant burnout (r=. 603, p<.001) (Table 2). Hierarchical regression analyses demonstrate that demographics (including on-job education, unit, marriage, religion, workday per month), over-commitment, effort-reward imbalance, and burnout are predictors toward physical and mental health of nurses in the medical center and the regional hospital. For nurses' physical-mental health, the independent interpretation variances among predictors are 9.9% by demographic variables, 24.4% by job stress (including 17.9% from over-commitment and 6.5% from effort-reward imbalance) and 12.5% by burnout (Table 3).

➢Table 1 Relationship between demographic variables and physical-mental health

Variables	N(%)	mean(SD)	F	p
age(years)			3.37	.035*
＜30	193(40.89)	48.86(21.72)		
31-40	212(44.92)	44(23.53)		
41-53	67(14.19)	41.91(23.42)		
Marital status			4.07	.044*
Single	299(63.35)	47.3(21.23)		
Married	173(36.65)	42.91(25.36)		
On the job training			9.2	.003**
No	441(93.43)	44.85(22.89)		
Yes	31(6.57)	57.65(19.85)		
Religion			7.83	.005**
No	166(35.17)	41.72(21.82)		
Yes	306(64.83)	47.85(23.22)		
Work days(momth)			4.62	.032*
≦20days	76(16.10)	40.54(20.18)		
＞20days	396(83.90)	46.68(23.28)		
Over time work days(momth)			7.4	.007**
≦15days	363(76.91)	44.13(22.11)		
＞15days	109(23.09)	50.89(24.77)		
Over time hours			5.17	.024*
≦1hour	252(53.39)	43.46(22.94)		
＞1hours	220(46.61)	48.25(22.64)		

*p<.05 **p<.01 ***p<.001

➢Table 2 Correlational analyses of Job stress, burnout and physical-mental health

Variables	1	2	3	4
1.Effort-Reward Imbalance	1			
2.Overcommitment	.259***	1		
3.Overall Burnout	.492***	.441***	1	
4.Physical-mental health	**.383*** **	**.443*** **	**.603*** **	1

a.*p<.05 ** p<.01 *** p<.001
b. Effort-Reward Imbalance : E/R＞1, E/R≦1
c. Overcommitment: OC≧16, OC＜16

➢Table 3 Hierarchical regression analyses demographic, job stress, burnout of physical-mental health

Variables	Mode 1			Mode2			Mode 3			Mode 4		
	Bata	t	p	Bata	t	p	Bata	t	p	Bata	t	p
Marital status	-0.052	-0.638	.524	-0.069	-0.951	.342	-0.093	-1.337	.182	-0.141	-2.252	**.025***
Job training	0.168	3.584	***.000*****	0.198	4.72	***.000*****	0.171	4.233	***.000*****	0.144	3.954	***.000*****
Work unit												
Emergency	0.025	0.475	.635	0.015	0.318	.751	-0.009	-0.189	.851	-0.07	-1.682	.093
Medicine	-0.05	-0.804	.422	-0.089	-1.592	.112	-0.128	-2.393	.017	-0.137	-2.842	**.005****
Surgical	-0.054	-0.881	.379	-0.11	-1.99	.047	-0.127	-2.417	.016	-0.13	-2.735	**.006****
Religion	0.143	3.13	.002**	0.108	2.624	.009	0.1	2.54	.011	0.091	2.566	**.011***
Work days	0.098	2.062	.040*	0.091	2.151	.032	0.082	2.036	.042	0.055	1.51	.132
Overtime work days	0.093	1.948	.052	0.084	1.968	.05	0.056	1.366	.173	-0.001	-0.031	.975
Overtime work hours	0.097	1.905	.057	0.065	1.431	.153	0.049	1.132	.258	0.01	0.251	.802
Annual salary(NT)												
600000-700000	0.002	0.017	.986	-0.033	-0.405	.686	-0.066	-0.837	.403	-0.155	-2.182	**.030***
700000-800000	0.013	0.194	.846	-0.03	-0.513	.608	-0.029	-0.525	.6	-0.052	-1.026	.305
Overcommitment				0.447	10.528	***.000*****	0.38	9.087	***.000*****	0.212	5.162	***.000*****
Job stress							0.28	6.641	***.000*****	0.103	2.462	**.014***
Burnout										0.486	10.239	***.000*****
Change statistics												
R^2	.099			.278			.343			.469		
F	2.042			6.875			8.946			14.508		
p	.003**			***.000*****			***.000*****			***.000*****		
Adjusted R^2	.05			.238			.305			.436		
$\triangle R^2$	**.099**			**.179**			**.065**			**.125**		
△F	2.042			110.842			44.105			104.843		

a.*p<.05 **p<.01 ***p<.001
b.Mode 1: Demographic variables.
Mode 2: Demographic variables, overcommitment(OC≧16, OC＜16).
Mode 3: Demographic variables, overcommitment(OC≧16, OC＜16), Job stress(E/R＞1, E/R≦1)
Mode 4: Demographic variables, overcommitment(OC≧16, OC＜16), Job stress(E/R＞1, E/R≦1), Burnout.

➢Conclusion

The results of this study provide important strategic suggestions for human resources management and hospital management. It is anticipated to find out evidences of how to support positive and healthy work environment, as well as to develop health promotion strategies for the frontline nursing workers. To reduce job stress and burnout problems in the nursing staff, it was crucial to redesign job processes to better suit workers' demands.

➢Literature Cited

1.Kristensen, T. S., Borritz, M., Villadsen, E., & Christensen, K. B. (2005). The Copenhagen Burnout Inventory: a new tool for the assessment of burnout. Work Stress. 19(3), 192-207.
2.Siegrist, J., Peter, R., Cremer, A., & Seidel, D. (1997). Chronic work stress is associated with atherogenic lipid and elevated fibrinogen in middle-aged men. *Journal of internal Medicine, 242*, 149-156.