

The relationship between Nurses' Perceived Job Related Stressors and Job Satisfaction in Critical Care Units at X Hospital, Surabaya

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Abstract- Job related stressors and Job dissatisfaction are becoming an increasingly large disorder. Stress has a cost for individuals in terms of health, wellbeing & job dissatisfaction as well as in terms of absenteeism and turnover which in turn affect the quality of patient care. This study aimed to determine the main nurse's perceived job related stressors and its relationship with job satisfaction at intensive care units (ICU and ICCU) in X hospital Surabaya in Indonesia. A comparative descriptive-analytic study was carried out on all the nurses working in both units with total population of 20 ICU nurses and 9 ICCU nurses using NIOSH Generic Job Stress Questionnaire and the Employee Satisfaction Inventory-ESI. Measurement of stress carried out by using Depression Anxiety and Stress Scale (DASS-42). The results have shown that there were four stressful subscales which are quantitative of workload, role conflict, environmental conditions, and lack of career development, while the most stressful factor was the quantitative of workload. There was a negative relationship between perceived job related stress and job satisfaction among intensive care units nurses in X hospital as indicated by (regression coefficient = -1.569). The study concluded that ICU and ICCU staff nurses were exposed to many kinds of job related stressors which affected their level of job satisfaction which emphasis adopting strategies to reduce perceived job related stress and thus increase job satisfaction which will be reflected on productivity and patient care quality.

Keywords: Job related Stressors, Job satisfaction, Nurses.

1. INTRODUCTION

Nursing entails the nurse meeting the patients needs whatever the situation. A nurse has to first assess the needs of patients, devise a plan of nursing care so that these needs can be met, implemented and she can carry out the plan of nursing care and finally evaluate the plan and take action to ensure that the needs, as assessed, have been fully met. Patients have mental, social, spiritual, cultural and personal needs as well as physical ones [1]. The needs will vary according to the patient's individual personality, social background and the condition he is suffering from at any particular time. It is also important to stress that nurses in all their nursing care activities, have a prime responsibility for the promotion of health as well as for caring for the sick and the mentally and physically handicapped [2, 3].

Within the hospital context, the intensive care units have already been the focus of several research studies related to nurses' stress. It is known that this

sector in the hospital is tasked with caring for patients in an acute or critical state, but within the possibility of recovery; patients who require specialized, permanent medical and nursing care; patients subject to having unstable vital functions, who need the support of special equipment for treatment and diagnosis [4].

Job Stress: Job stress is "the extent to which employees feels a tension of anxiety caused by their jobs" [5]. Job stress can also be defined as "the harmful physical and emotional responses that occur when the requirements of the job do not match the capabilities, resources, or needs of the worker [6].

Literature had suggested a strong relationship between stress and undesirable health among medical professionals, for example, an extra-ordinary stress may be responsible for an individual's coronary diseases [7], hypertension, headaches, asthma, peptic ulcers, and lower-back pain among others [8], and others of mental and physical health [9]. This, in turn, induces lower work productivity, job morale [10], and other human resource management problems, such as higher absenteeism, lower job satisfaction [11], and

higher turnover [12]. As a result, higher operational costs, lower job efficiency, and worse service quality may occur, all of which are detrimental to the hospital's performance.

Job satisfaction has been defined as the positive feeling or attitude about various aspects or facets of the job [13], higher levels of nurse job satisfaction have been positively linked to improved quality of care, patient outcomes [14], and retention of staff [15].

Several studies have tried to determine the link between stress and job satisfaction. Job satisfaction and job stress are the two hot focuses in human resource management researches. According to the researches job satisfaction has been found significant relationship with job stress [16].

One study of general practitioners in England identified four job stressors that were predictive of job dissatisfaction [17]. In other study, stated that organization factors such as workload and working condition were negatively related with job satisfaction (18).

Fletcher and Payne identified that a lack of satisfaction can be a source of stress, while high satisfaction can alleviate the effects of stress. This study reveals that, both of job stress and job satisfaction were found to be interrelated (19). The study of Landsbergis showed that high levels of work stress are associated with low levels of job satisfaction (20). Moreover, Cummins have emphasized that job stressors are predictive of job dissatisfaction and greater propensity to leave the organization (21).

2. METHOD

This research method is a descriptive correlational study design to examine nurses' perception of stress and level of job satisfaction in intensive care unit (ICU) and intensive coronary care unit ICCU. Because of few number of nurses who working in both departments, so study population was all the staff nurses in ICU (20) and ICCU (9) with total 29 nurses were taken in this study. Head nurses of both departments were excluded from the study because of their work nature that is different from staff nurse's work nature.

Variable measurements employed in this study are well defined and developed tools from previous studies. The first part included demographic variables such as gender, age, marriage situation, employment duration, and personality type. The second part was job stress which is measured by "The NIOSH generic

job stress Job questionnaire" [22]. Six stressor variables were included in this study: quantitative workload, working variance, environmental conditions, intragroup conflict, role conflict, job future ambiguity, and social support from supervisor and coworker. Each of job stressors with total 30-items was measured on a four-point Likert Scale in which (1) indicated "strongly disagree", (2) indicated "disagree", (3) indicated "agree" and (4) indicated "strongly agree. The main reason for this choice of all six job stressor was widely included aspects stress in job environment. The second part includes stress which is measured by using of the Depression Anxiety Stress Scale (DASS-42) [23], it is a 15-item self-report inventory designed to measure the presence and severity of symptoms of stress. The third part includes job satisfaction which is measured by using the Employee Satisfaction Inventory-ESI [24], and measured on a four point scale with least satisfied (one) to very satisfied (four).

In general, 29 nurses were studied. Statistical analysis performed to test the relationship between independent variables and the variable. Firstly, the dependent variable in this study is that individual characteristics, job stressors, with dependent variable which is stress; Secondly, to test the relationship between stress as independent variable with job satisfaction as dependent variable.

3. RESULT

SPSS program (version 16) was used to analyze the results. Out of 29 Questionnaires distributed, all staff nurses responded and completed the questionnaires. Of the 29 staff nurses who, 69% of staff nurses were from ICU department while 31% of staff from ICCU department. 11 nurses (37%) were male and 18 nurses (63 %) were female. 89.7% were younger than 40 years old, 10.3% were more than 40 years. About 55.2% of nurses had less than 10 years of ICU experience, and majority of staff nurses are married (86.2%). Eighteen nurses (62.1%) have personality type A, while 11 nurses (37.9) have personality type B. Table (1) illustrates Descriptive Statistics for respondent characteristics.

The results of job stressor perception by NIOSH generic job stress Job questionnaire shown in Tabel (2). Perception of high quantitative workload in ICCU (33.3%) more than ICU staff nurses (25%), while high working variance in ICCU (66.7%) department more than ICU (45%). Furthermore, the results have shown that role conflict and job future ambiguity subscales were stressful for both staff nurses in ICU and ICCU.

Table 1: Descriptive statistics for respondent characteristics

Respondent Characteristics	Frequency	Percent
Working setting		
ICU	20	69%
ICCU	9	31%
Gender		
Male	11	37.9%
Female	18	62.1%
Age		
Less than 40	26	89.7%
More than 40	3	10.3%
Experience duration		
Less than 10 years	16	55.2%
More than 10 years	13	44.8%
Marital status		
Single	4	13.8%
Married	25	86.2%
Personality type		
Type A	18	62.1%
Type B	11	37.9%

Table 2. Comparisons of Job Stressor Perception in ICU and ICCU

Perception of Job stressors	ICU		ICCU	
	F	P	F	P
Quantitative workload				
high	5	25%	3	33.3%
Average	6	30%	5	55.6%
low	9	45%	1	11.1%
Working variance				
Low	11	55%	3	33.3%
High	9	45%	6	66.7%
Environmental conditions				
Uncomfortable	9	45%	3	33.3%
Comfortable	11	55%	6	66.7%
Intragroup conflict				
High	10	50%	5	55.6%
Low	10	50%	4	44.4%
Job future ambiguity				
High	10	50%	8	88.9%
Low	10	50%	1	11.1%
Role conflict				
High	14	70%	3	33.3%
Low	6	30%	6	66.7%
Social support				
Low	6	30%	1	11.1%
High	14	70%	8	88.9%

Table 3 shows that moderate stress was found in 20%, and mild stress was 20% in staff nurses in ICU. While 20% of ICCU have mild stress, in general stress in ICU department looks higher than ICCU department.

Table 3. Comparisons of Stress in ICU and ICCU

Stress level	ICU		ICCU	
	F	P	F	P
High	1	5%	0	0
Moderate	4	20%	1	11.1%
Mild	4	20%	2	22.2%
Normal	11	55%	6	66.7%

According to table 4, the total job satisfaction among staff nurses in ICU and ICCU has been calculated by frequency and valid percent and the result was (65%) of nurses in ICU have expressed their job satisfaction, while (66.6%) of nurses in ICCU are work satisfied. In general, job satisfaction looks same in both ICU and ICCU departments.

Table 4. Comparisons of job satisfaction in ICU and ICCU

Job Satisfaction	ICU		ICCU	
	F	P	F	P
Less satisfied	7	35%	3	33.3%
Moderately satisfied	5	25%	2	22.2%
Very satisfied	8	40%	4	44.4%

The results of multiple logistic regressions to analysis correlation between individual characteristics, perceived job stressors with job stress are as follows (Table 5). Based on Table 5 there are five variables that have no relation with the job stress. Results of correlation of independent variables: gender, age, marital state, personality type, working variance, intragroup conflict and social support from supervisor and coworker have no relation with the job stress; can be seen from odd ratio less than 1. There are five independent variables have correlation with independent variable job stress which is experience duration more than 10 years, quantitative workload, environmental conditions, job future ambiguity, and role conflict, can be seen from odd ratio greater than 1. It's showed by table 4 that experience duration is the most stressful stressors can be seen by positive regression coefficient = 1.204, and OR =3.333 meaning that nurse with experience duration more than 10 years is 3 times more likely to have stress than nurse with experience duration less than 10 years.

Table 5. Regression analysis for most stressful subscales and least stressful subscales perceived by nurses in ICU and ICCU

Variable	B	OR EXP(B)
Male	.336	.404
Female		reference
Age ≥ 40	-2.503	.203
Age < 40		reference
Married	1.674	.833
Single		reference
Personality type A	-.981	.677
Personality type B		reference
Experience duration ≥ 10	1.204	3.333
Experience duration < 10		reference
Quantitative workload	.416	1.516
Working variance	-.619	.538
Environmental conditions	.166	1.181
Intragroup conflict	-.319	.727
Job future ambiguity	.110	1.116
Role conflict	.211	1.235
Social support	.775	.217

The effect of perceived job related stress on job satisfaction shown in (Tabel 6): to achieve the purpose of identifying the effect of perceived job related stress on job satisfaction among staff nurses ICU and ICCU at X hospital, a logistic regression test has been performed. There was a negative significant relationship between perceived job related stress and job satisfaction among staff nurses at ICU and ICCU in X hospital as indicated by (regression coefficient = -1.569, and OR = 4,800).

Tabel 6: Regression analysis of perceived job stress on job satisfaction among nurses in ICU and ICCU at X hospital

Variable	(B)	OR EXP(B)	95% C.I	
			lower	upper
Job stress	-1.569	4.800	.979	23.544

4. DISCUSSION

‘Stress’ should be viewed as a continuum in which an individual goes through feelings of eustress to increasing levels of distress. ‘Eustress’ represents positive aspects of stress; ‘Distress’ represents negative aspects of stress and may lead to negative physiological and psychological effects. Severe and prolonged distress may lead to burnout. Transition from eustress to distress depends upon an individual’s appraisal of stressful situation [25].

The purpose of this study was to describe main stressors affecting nurses at ICU and ICCU in X hospital Surabaya. Study results have shown that the most stressful categories for staff nurses at ICU and ICCU in X hospital Surabaya were experience duration more than 10 years, quantitative workload, environmental conditions, job future ambiguity, and role conflict.

The highest stressful condition that nurses rated as always stressful is quantitative workload. This may be due to linking death with clinical failure. Not enough staff to cover the unit adequately was frequently stressful condition. In line with this, a study done in Jordan showed that the lack of enough staff to adequately cover the unit is the most stressful event perceived by the staff nurses [26]. Regarding job stress, the results of the present study show that ICU staff nurses are relatively stressful than ICCU nurses, 20% perceived mild stress, 20% perceived moderate stress and 5% perceived high stress levels. In general, current study showed that there existed overall job related variation between ICU and ICCU departments. In line with the present study findings from Jordan’s study supports that occupational stress difference across working unit [27]. Finding of this study also indicated that there is no variation in job-related stress due to gender, age, experience duration, and personality type.

However, employment duration in this study is associated with job stress, it is corresponding with study conducted in India indicated that nurses with a total nursing experience of 11–20 years feel more stress [28]. About job satisfaction, the results of the present study show that ICCU staff nurses are relatively satisfied in their work than ICU nurses, 22% moderately satisfied and 44.4% very satisfied. In this study job satisfaction was also a predictor of job related stress in which their association is inverse, as indicated by (regression coefficient = -1.569, and OR = 4,800); as job satisfaction increases nurse’s stress would decrease. This finding is supported by a study done in Sao Paulo that reveals dissatisfaction with work could lead to stress [29]. Furthermore, similar to a study done in Kampala, Uganda that reveals there were significant negative relationships between occupational stress job satisfaction [30].

This study indicates the importance of adopting strategies to reduce the perceived job related stress and to demonstrate more administrative support for the staff nurses in the work place at ICU and ICCU in X

hospital Surabaya. Nurse managers should promote an organizational culture characterized by cooperation, social integration, clear job duties and responsibilities, improvement of environmental conditions such as temperature, lighting, ventilation, provide job security and opportunities for job advancement among nurses to reduce the stressors and thus achieve the holistic care provided by the nurses and improve the quality of care provided for the patients at ICU and ICU at X hospital Surabaya.

The results of this study may have been influenced by a number of methodological limitations. The original survey instrument had to be revised and tailored to reflect the current situation in X hospital and Intensive care units practice and the length of the questionnaire may have been a limiting factor.

5. CONCLUSION

ICU and ICCU staff nurses at X hospital Surabaya were exposed to many kinds of job related stressors which affected their level of job satisfaction. The most stressful aspect for them was quantitative workload, environmental conditions, job future ambiguity, and role conflict. This emphasis adopting strategies to reduce perceived job related stress and thus increase job satisfaction which will be reflected on patient care quality.

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Conflict of Interest

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REFERENCES

- [1] Adams A. & S. Bond. (2000): Hospital nurse's job satisfaction, individual and organizational characteristics. *Journal of Advanced Nursing* 32(3), 536-543.
- [2] Aktharsha U, Anisa H. (2011): Job stress and job satisfaction: An investigation of nursing personnel. *JM Int J HR.* ; 18-32.
- [3] Al-Hawajreh K.(2011): Exploring the Relationship between Occupational Stress and Organizational Commitment among Nurses in Selected Jordanian Hospitals. *An Najah Univ. J Res.*;25 (7):1931-75.
- [4] ALnems A, Aboads F. (2005): Nurses' Perceived Job Related Stress and Job Satisfaction in Amman Private Hospitals.
- [5] Ann J. Zwemer. (1995). *Basic psychology for Nurses in India*, B.I. publications, Madras.
- [6] Cavalheiro AM, LA Moura Junior DF. Stress in nurses working in intensive care units. *Rev Latino-Americana*. 2008;16 (1):29-35.
- [7] Cavalheiro AM, Moura Junior DF, Lopes AC. (2008): Stress in nurses working in intensive care units. *Rev Latino-am Enfermagem, janeiro-fevereiro*; 16(1):29-35.
- [8] Chandrasekhar, S.F., Chandra Monli, D. and Anjaiah, P. (1995): Job Stress and Psychosomatic Problems of Nurses at selected hospitals. *Indian Journal of Psychological Issues* 2 (1) 9-13
- [9] Cooper, C., U. Rout and B. Faragher, (1989): Mental Health, Job Satisfaction and Job Stress among General Practitioners, *B Medical Journal*, 298: 366-370.
- [10] Cummins, R.C., (1990): Job stress and the buffering effort of supervisory support, *Group and Organizational Studies*, 15(1): 92-104.
- [11] Fletcher, J.B. and R. Payne, (1980): "Stress and Work: A Review and a Theoretical Framework", Part 1, *Personnel Review*, 9: 1-20.
- [12] Gill, A., A. Flaschner and M. Shachar, (2006): Mitigating stress and burnout by implementing transformational-leadership. *International Journal of Contemporary Hospitality Management*, 18(6): 469-481.
- [13] Helen C. Sinclair and Josephine N. Fawcett. (1991): *Altschul's Psychology For Nurses*. London. ELBS
- [14] Koustelios, A. & Bagiatis, K. (1997): The employee satisfaction (or) inventory (ESI): development of a scale to measure satisfaction of Greek employees. *Educational and Psychological Measurement*, 57, 469-76.
- [15] Lambert VA, CE. Lambert, M. Petrini, XMLi, YJ. Zhang (2007): Workplace and personal factors associated with physical and mental health in hospital nurses in China. *Nursing & Health Sciences* 9(2), 120-126.
- [16] Landsbergis, P.A., 1988. Occupational stress among health care workers: A test of the job demands-control model, *Journal of Organizational Behavior* 9: 217-239.

- [17] Lee I. & H. Wang. (2005): Perceived occupational stress and related factors in public health nurses. *Journal of Nursing Research* 10 (4), 253-260.
- [18] Lee I. (2004): Work stress, coping strategies, and consequences among public health nurses - based on an interactive model. *Taiwan Journal of Public Health* 23 (5):398-405.
- [19] Lovibond SH, Lovibond PF. (1995). *Manual for the Depression Anxiety Stress Scales*. 2nd Ed. Sydney: Psychology Foundation of Australia.
- [20] McVicar A. (2003): Workplace stress in nursing: a literature review. *J Adv Nurs.* ;44:633-42.
- [21] Nabirye R, Brown K. Occupational stress, job satisfaction and job performance among hospital nurses in Kampala, Uganda. *J Nurs Mgt.* 2011;19:760-768.
- [22] Newman K., U. Maylor, & B. Chansarkar (2001). The nurse retention, quality of care and patient satisfaction chain. *International Journal of Health Care Quality Assurance* 14 (2), 57-68.
- [23] Pejic AR. (2005). Verbal abuse: a problem for pediatric nurses. *Pediatric Nursing*, 31 (4), 271-281.
- [24] Siu O-L, PE. Spector, CL. Cooper, L Lu, S. Yu (2002): Managerial stress greater china: the direct moderator effects of coping strategies and working locus of control. *Applied Psychology: An International*, 51(4), 608-632.
- [25] Solaymannezhad, H., (2004): The relationship between, job stress and job satisfaction in government organization in Ilam, Master thesis, Ilam Islamic Azad University, Iran.
- [26] Stamps, P.L. and E.B. Piedmonte, (1986): *Nurses and work satisfaction: An index for measurement*. Ann Arbor, MI: Health Administration Press Perspectives.
- [27] Steffy BD & JW Jones. (1988): Workplace stress and indicators of coronary-disease risk. *Academy of Management Journal*, 31(3): 686-698.
- [28] The National Institute for Occupational Safety and Health. NIOSH Generic Job Stress Questionnaire.
<http://www.cdc.gov/niosh/topics/workorg/tools/pdfs/niosh-generic-job-stress-questionnaire>.
- [29] Throckmorton T. (2007): Stressors in oncology nursing: potential sources of absenteeism and turnover. *Oncology Nursing Forum* 34 (2):544-544.
- [30] Vinokur-Kaplan, J.X., (1991): Job Satisfaction among Social Workers in Public and Voluntary Child Welfare Agencies, *Child Welfare*, 155: 81-91.