
Work Overload, Role Ambiguity and Role Boundary and its Effect on Burnout among Nurses of Public Hospitals in Malaysia

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ABSTRACT

Burnout among human services professionals, such as nurses, has been studied in various countries for years using Maslach Burnout Inventory (MBI). The purpose of this paper is to present the findings on the work overload, role ambiguity and role boundary and its effect on burnout of 2400 nurses in the northern hospitals of Malaysia. Quantitative data were collected via a questionnaire distributed amongst the nurses in the Medical and Maternity wards of hospitals in the northern part of Malaysia. The result shows that burnout factors have a significant positive correlation with burnout. It is interesting to note that hierarchical multiple regression analysis indicated the three dimension of burnout, namely work overload, role ambiguity and role boundary have significant relationships and influence with burnout. It is essential, on an individual as well as organizational level, to determine and acknowledge the levels of work overload, role ambiguity and role boundary and burnout in order to manage the impact thereof and to prevent escalation of the problem. Interventions and detailed action planning should be performed prior to commencing to minimize burnout and provide therapy to shorten and improve the healing process from burnout or traumatic events encountered in workplace. Medical and maternity nurses are exposed to the multiple changes experienced currently world wide as well as to the unpredictable nature of service delivery with the number of patients to be treated and the nature of the care needed that vary considerably.

Keywords: Burnout, work overload, role ambiguity, role responsibility, boundary and physical environment

INTRODUCTION

The vision of the Malaysia's Ministry of Health is to be a nation of healthy individuals, families and communities through a health system that is equitable, affordable, efficient, technologically appropriate, environmentally adaptable and consumer-friendly, with emphasis on quality, innovation, health promotion and respect for human dignity, and which promotes individual responsibility and community participation towards and enhanced quality of life. The highest priority is given to upgrading the quality of health services in both the urban and rural areas. This encompasses promotive, preventive, curative and rehabilitative care backed by a Quality Assurance Program and a comprehensive health development plan. Promotive and preventive services are further enhanced principally through the Health Education Program of which the Health Lifestyle initiatives focus efforts to keep Malaysians Healthy, and the Family Health and Environmental Sanitation Program with their emphasis on preventive health for the family and environment respectively.

Nurses nationwide consistently reported that hospital nurse staffing levels are inadequate to provide safe and effective care. Physicians agree, citing inadequate nurse staffing as a major impediment to the provision of high quality hospital care. The shortage of hospital nurses may be linked to unrealistic nurse workloads. Forty percent of hospital nurses have burnout levels that exceed the norms for health care workers. Medical and Maternity nurses have heavy workloads and role overload, conflicting role and extensive responsibilities, but only limited authority. They must care for unstable patients, carry out procedures accurately and react to extremely urgent matters (Leiter et al, 1998), although their decision latitude is often insufficient to cope effectively with these demands (Lee-Hsieh, Kuo and Seng, 2005). Such working conditions form the breeding ground for job

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burnout and later become burnout. The findings by Lee-Hsieh, Kuo and Seng (2010) provide empirical support for this phenomenon.

REVIEW OF LITERATURE

Burnout

Burnout is a response of individuals to chronic emotional and interpersonal burnout experiences in the workplace that is defined by three dimensions namely emotional exhaustion, depersonalization and personal accomplishment. The complexity of the construct has been established by the past 25 years of research and positions the individual burnout experience within the larger organizational context of individuals' relationships with their job (Maslach, Schaufeli & Leiter, 2001). According to Schaufeli & Enzmann (1998: 6-8), the development of the burnout concept took place independently along the two lines, namely the clinical approach and the research approach. According to the demand control model (Karasek 1997), job that combine high demands with low control evoke psychological and physical burnout (high strain jobs). Such working conditions eventually deplete nurses' emotional resources and may initiate the burnout

Role Overload

Osipow (1988) points out six sources which may cause occupational stress, i.e. role overload; role insufficiency; role ambiguity; role boundary; role responsibility; and physical environment. Role overload happens when an individual experience the lacking of resources, including time and energy, needed to meet the demands of all roles (Hecht, 2007). Ahmady et al. (2007) defines role overload as having too much to do and too many responsibilities to do everything well.

Role Ambiguity

Role ambiguity - Role ambiguity means the lack of clear and specific information regarding work role requirements (Quah and Campbell, 1994). Ahmady, Changiz, Masiello and Brommels (2007) defines role ambiguity as having unclear feedback from others about one's responsibilities and performance. According to Manshor et al (2003), role ambiguity arises when a person does not have a clear picture about his work objectives and the scope and responsibilities of his own job as well as his co-workers' expectation of him.

Role Boundaries

According to Bulger, Matthews and Hoffman (2007), role boundaries relate to how individuals who have multiple roles organize themselves in each role. A boundary can vary in strength depending on its permeability and flexibility. Permeability is the extent to which one role intrudes or penetrates into another. A work boundary can be considered permeable if the employee receives calls from family while at work. A personal life boundary can be considered permeable if the employee takes work home to complete. Flexibility is the extent to which one role can be relaxed to meet the needs of another role. There are two aspects of flexibility in relation to role boundary strength: ability and willingness.

Role responsibility and Physical Environment

Role responsibility is the level of responsibility an individual feels for his/her own performance and welfare and the well-being of his/her colleagues as well (Osipow, 1988). Additionally, a physical environment is the extreme physical condition/surrounding which may be stressful to a person, such as heat and noise (Osipow, 1988). Boey, Chan, Ko, Goh and Lin (2010) found that majority (35.4%) of nurses in Singapore considered the burnout factors as moderate, 32.4% considered it as high, and another 32.2% considered it as low. Larson (2005) listed the causes of burnout factors and burnout, among others, extended hours of working and the 24/7 environment and global organizations. Fair brother and Warn (2003) conducted a research among naval officer trainees and found that burnout was associated with the lack of clarity in the work role, disruption of everyday routine and disruption of personal life. On the other hand, burnout is not associated with discomfort due to the physical environment, or with the psychosocial factors of leadership, teamwork and social climate.

Hence, the hypothesis conjectured in this study are:

Ho1: Role overload has no relationship with burnout.

- Ho2: Role ambiguity has no relationship with burnout.
- Ho3: Role boundary has no relationship with burnout.
- Ho4: Role responsibility has no relationship with burnout.
- Ho5: Physical environment has no relationship with burnout.
- Ho6: Burnout factors have no influential relationship with burnout

THE METHODOLOGY

Respondents in this study consisted of staff nurses from the medical and the maternity unit of 16 public hospitals. A Total of 3000 questionnaires were distributed to the hospitals in Perlis, Kedah, Penang and Perak and a sample of 2400 were successfully collected. It took nine months for researchers to get permission, distributed and collected the responses.

MEASUREMENTS

Burnout

The predictor variables in this study consist of consisted of role overload, role insufficiency, role ambiguity, role Boundary, role responsibility and physical environment. The Occupational Burnout Inventory-Revised (Osipow, 1998), namely the Occupational Roles Questionnaire (ORQ) which originally has 60 items. The questionnaire was used by Murugayah (2008) who conducted a study on government officers of administrative and professional level in Malaysia. Originally, The OSI-R has three components, i.e. Occupational Roles Questionnaire (ORQ), Personal Strain Questionnaire (PSQ) and Personal Resources Questionnaire (PRQ). Salmond and Ropis (2005) who made a mixed-method and comparison study between medical-surgical and home care nurses in the United States found that the former experienced higher burnout than the latter. In examining relationship of job stressors and general well-being of the nurses, it was found nurses who experience higher level of burnout will report higher negative mood, vice versa.

Ho (1996) found that there are significant and positive relationships between the teacher burnout measures and the GHQ. In conducting a research on a university staff, Dua (1994) found that general burnout and work related burnout are associated with poor physical health, poor psychological and emotional health and high job dissatisfaction. Malek, Mearns and Flin (2010) made a comparative study between Malaysian and the United Kingdom firefighters and found that the sources of burnout have significant negative correlations with burnout.

Demographic Variables of the Nurses and Hospitals

This sections presents the frequency distributions of demographic variables of the nurses and hospitals.

Table4.0. *Location of Hospitals*

Location	Frequency	Percent
Perlis	197	8.2
Kedah	784	32.7
Penang	756	31.5
Perak	663	27.6
Total	2400	100.0

Table 4.0 shows that 197(8.2 %) respondents are from Perlis, 784(32.7%) are from Kedah, 756(31.5%) are from Penang and 663(27.6%) are from Perak. Therefore majority of the respondents are from the hospital in Kedah.

Table4.1. *Numbers of Patients*

Number of patients	Frequency	Percent
21-25 patients	754	31.4
26-30 patients	589	24.5
31-35 patients	331	13.8
36-40 patients	485	20.2
more than 40 patients	241	10.0
Total	2400	100.0

Table 4.1 shows that 754(31.4%) nurses have to take care 21 to 25 patients, 589(24.5%) nurses have to take care 26 – 30 patients, 331(13.8%) nurses have to take care 31 – 35 patients, 485(20.2.8%) nurses have to take care 36 – 40 patients, 241(10.0%) have to take care more than 40 patients. The above table shows that majority of the nurses take care of 21 to 25 patients.

Table4.2. Respondent Gender

RESPONDENT GENDER	Frequency	Percent
Male	196	8.2
Female	2204	91.8
Total	2400	100.0

Table 4.2 shows that there are 196(8.2%) male staff nurse and 2204 (91.8%) are female staff nurse. This shows that the majority of staff nurses are female.

Table4.3. Respondent Age

RESPONDENT AGE	Frequency	Percent
22-25	224	9.3
26-30	1054	43.9
	578	24.1
40 and above	544	22.7
Total	2400	100.0

Table 4.3 shows that 224 (9.3%) of the nurses are around 22 -25 years old, 1054 (43.9%) of the nurses are around 26 to 30 years old, 578 (24.1%) of the nurses are around 30 - 40 years old, 544 (22.7%) of the nurses are around 40 and above years old and. The table shows that majority of nurses are around 30 to 40 years old.

Table4.4. Working Experience

WORKING EXPERIENCE	Frequency	Percent
1 – 5	671	28.0
6 -10	700	29.2
11 -15	367	15.3
16 -20	285	11.9
21 and above	377	15.7
Total	2400	100.0

Table 4.4 shows that 671(28.0) nurses have 1 to 5 years experience, 700 (29.2%) nurses have 6 to 10 years working experiences, 367 (15.3%) have 11to 15 years working experiences, 285 (11.9%) have 16 to 20 years of working experiences, and 377 (15.7%) nurses have 21 years of working experiences. The table shows that majority of the nurses 700 (29.2%) have 6 to 10 years of working experiences.

Table4.5. Marital Status

MARITAL STATUS	Frequency	Percent
Single	666	27.8
Married	1658	69.1
Widow	76	3.2
Total	2400	100.0

Table 4.5 shows that 666(27.8%) nurses are not married while 1658(69.1%) nurses are married and 76 (3.2%) are widowed. This shows that majority of the nurses that is 1658 (69.1%).

Table4.6. Level of Education

LEVEL OF EDUCATION	Frequency	Percent
Certificate	803	35.3
Diploma	1595	64.7
Degree	2	.3
Total	2400	100.0

Table 4.6 shows that 803 (35.3%) of the nurses have certificate in nursing, 1595 (64.7%) have diploma in nursing and 2(.3%) have degree. The table shows that majority of the nurses (64%)have diploma in nursing.

Burnout Factors

All hypotheses were tested by using inferential statistics. For the first to Fifth hypotheses, they were tested by using Pearson Correlation; for the sixth hypothesis, multiple regression was used.

Usage of Pearson Correlation

Pearson correlation was used to test hypotheses 1 to 6. The analysis was meant to determine whether burnout factors and burnout have any relationship. The output is shown in Table 4.20.

Table2. Results of Pearson Correlation Analysis between Burnout Factors and Burnout

VARIABLE	BURNOUT
Role Overload	.116
Role Ambiguity	.333
Role Boundary	.326
Role responsibility	.055
Physical Environment	.050
* Correlation is significant at the 0.05 level (2-tailed)	
** Correlation is significant at the 0.01 level (2-tailed)	

The result of the analysis shows that there is a significant relationship between role overload and burnout. The correlation value of this variable of $r = 0.116$, means that a positive and low relationship exists between the two. Thus H_01 is rejected. The result shows that role ambiguity has significant and positive relationship with burnout. The relationship between the role ambiguity is low because the $r = 0.333$. Thus, H_02 is rejected. The result of the analysis shows that there is a significant correlation between role boundary and burnout. The correlation value of $r = 0.326$ indicates that the two variables are positively and moderately correlated. Thus, H_03 is rejected. The result shows that role responsibility and burnout is not significantly correlated. Since the correlation value, $r = 0.055$, $p > 0.05$. Thus role responsibility and burnout is not positively correlated. Hence, H_04 fail to be rejected. Physical environment and burnout is not significantly correlated as the $r = 0.050$, $p > 0.05$. Thus, we fail to reject H_5 .

Usage of Multiple Regressions

A multiple regression analysis is used to test H_07 . Multiple regression tells how much of the variance in the dependent variable can be explained by the independent variable. From the model summary indicated in Table 4.31, we can see that the R^2 value is 0.265 which means that independent variable only explains 26.5% of the variation in the dependent variable. The adjusted R^2 value is 0.252 which means that the dimensions of occupational burnout contributed only 25.2% of burnout. The remaining 74.8% were contributed by other factors not included in this study.

Table3. Multiple regression analysis of burnout factors

Variables	Beta	T	Significant t
Role Overload	.098	2.045	.042
Role Ambiguity	.239	4.831	.000
Role Boundary	.250	5.096	.000
Role responsibility	.035	.716	.475
Physical Environment	-.001	-.030	.976

a. Dependent variable Adjusted $R^2 = .265$ $F = 19.381$ $** p < 0.01$

The regression analysis of five burnout factors were influential at $R^2 = .265\%$ $p < 0.05$, at $F = 19.381$. However, it was found out that only three factors were significant which have p-value < 0.05 , namely role overload, role ambiguity and role boundary. Another two dimensions, i.e. role responsibility and physical environment were not significant to b since the p-value of each burnout was 0.475, and 0.976. We may conclude by saying that at least three burnout factors namely role overload, role ambiguity, role boundary have impact on burnout. Hence, H_07 is accepted.

RECOMENDATIONS

The result shows that the mean score for role overload is the highest (3.848) among all dimensions of occupational stress. This indicates that nurses perceived heavy workload as the main factor which

contributes to their burnout. This finding is similar with the documented sources of burnout in the international literature. Many researchers (Manshor, Fontaine and Chong, 2002; Murray-Gibbons and Gibbons, 2007; Emilia and Hassim, 2007; Cai, Li and Zhang, 2008; Ho, 1996, Duffy and Ching, 2001; Fair brother and Wood, 2003; Salmond and Ropis, 2005; Zulkefly and Baharuddin, 2010; Baehler and Bryson, 2008; Fujino et. al. 2001) found that heavy workload is one of the main factors which causes burnout across all types of occupations, namely managers, nurses, chefs, nurses, teachers, naval officers, policy advisors and permanent night workers.

As expected from the result of correlation analysis, a multiple regression analysis shows that only four dimensions of occupational burnout have significant influence towards burnout, namely role overload, role insufficiency, role ambiguity and role boundary. As indicated by the multiple regression analysis, 25.2% of burnout is due to burnout, whereas another 74.8% were contributed by other factors not included in this study.

Undeniably, organizational factors can lead to poor emotional health. Dua (1994) found that apart from physical health and job dissatisfaction, emotional health are also the direct impacts of burnout. Brubaker (as cited by Pattie, 2006) reported burnout which resulted from service-oriented jobs has a steady increase of psychological ailments. Similarly, Marzabadi and Tarkhorani (2007) found that organizational factors are among the causes of burnout. According to Murphy (as cited by Wood & Budden, 2006), understanding the causes of burnout by measuring it accurately and identifying problem areas, implementing interventions and re-evaluating the situation could prove useful. Hence, the researcher has come up with recommendations to improve the present situation, as well as to cater the problems brought by the five dimensions of burnout, namely role overload, role ambiguity, role boundary. Interpersonal relationship and family factors have also been taken into account.

Future Research

Future research should be conducted to identify the relationship between burnout factors and physical health among nurses. It is also recommended that the scope of the research be broadened to nurses in all public hospitals in Malaysia. Further, future research should also consider longitudinal research in order to capture the development and/or causal connections between burnout factors and burnout.

CONCLUSION

This study has been fruitful in identifying the relationship between occupational stress and psychological well-being. It is hoped that this study would trigger an interest from all relevant parties related to nurses to dwell further into the research questions, particularly, those related to burnout among nurses who have contributed significantly to the public service and the nation's development. It is also hoped that, nurses can live a healthy life and are able to balance it in almost every aspect. Their psychological and physiological well-being should go mainstream and become a strategic issues that are routinely considered by all hospitals, both in private and public hospitals. This is so because if the psychological and physiological' well-beings are well taken care of, it's a win-win situation for the nurses and hospitals alike.

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