

SHORT COMMUNICATION

Occupational stress, psychological strain and coping resources among nurses at Institut Perubatan dan Pergigian Termaju

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Abstract:

Increasing in workloads can be a source of stress for many nurses around the world because of the demands for higher performance and the ability to perform multi-tasking jobs. The aims of this study were to identify occupation stress, psychological strain and coping resources among the nurses in Institut Perubatan dan Pergigian Termaju (IPPT), Universiti Sains Malaysia. A cross-sectional study of 100 nurses was conducted in various departments at IPPT. Validated questionnaire Occupational Stress Inventory – Revised (OSI-R) was used in data collection. Senior staff aged 41-50 years old perceived higher level of stress relating role boundary and responsibility rather than the junior staff ($p=0.011$). The senior staffs are also perceived higher level of psychological strain compared with the junior staff. As conclusion, there is a positive correlation between age and occupational stress, psychological strain, and coping resources among IPPT nurses

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1. INTRODUCTION

Occupational stress, psychological strain and inadequate coping resources can increase the burnout intentions among nurses and can lead to shortage of nurses. Turnover among new graduated nurses are high due to job related stress [1]. Occupational stress can affect physical health of the involved nurses. Mental stress and strain is believed to be one of the frequent factors that can cause a major chronic disease that can lead to morbidity and mortality such as cardiovascular disease and hypertension [2].

The levels of stress among nurses are different from one department to another department and nurses who work in critical area perceived more occupational stress compare with nurses in non-critical area. Nurses who work in dialysis unit received less job stress and have higher job satisfaction compared to nurses that working in ICU and ward nurses [3]. In comparison between work related stresses among pediatric nurses, medical surgical nurse perceived high level of burnout compare to nurses in oncology unit [4].

This study of occupational stress, psychological strain and coping resources are important because there is an evidence in previous study shows that stress can affected the physical health of the nurses and increased the turnover intentions among nurses, especially newly graduated nurses. Most of the staff in IPPT was newly graduated (75 % are less than 3 years' service) and the impact of this study is significant in

order to overcome the occupational stress and to prevent or minimized the turnover among nurses in IPPT, and to improve coping strategies among the nurses.

The purpose of this study is to identify the occupation stress, psychological strain and coping resources among the nurses in Institut Perubatan dan Pergigian Termaju (IPPT), Universiti Sains Malaysia.

2. METHODOLOGY

Convenience sampling was used in the cross-sectional to select the sample. A nursing staff duty list for a period of 9th April to 28th April 2012 has been obtained from each unit manager as a basis for sampling frame. Subject for this study were all from nurses Institut Perubatan dan Pergigian Termaju (IPPT). IPPT is a new research centre located in Bertam, Kepala Batas, Seberang Perai Utara, Pulau Pinang, Malaysia. Most of the nurses in IPPT were newly qualified and the senior nurses were transferred from Hospital Universiti Sains Malaysia, Kubang Kerian, Kelantan.

Data collection was used Occupational Stress Inventory Revised Edition (OSI-R) [5]. The OSI-R consists of 10 items for each subscale to measures an individual's perception of stressful of work roles. The demographic data sheet, OSI-R questionnaires, explanatory letter of purpose and confidentiality, consent form, a small gift and self-addressed

envelope has been distributed to IPPT nurses that worked on that study period. Participants has been given approximately 30 to 45 minutes to answer the questionnaires and returned the completed questionnaires into the provided envelope and dispatch their completed questionnaires directly back to the researcher. All data obtain were analyzed using SPSS. One-way ANOVA was used for comparison of OSI-R scores and demographic data.

3. RESULTS

Total number of respondents was 100 participant and the largest group was aged 25 to 30 years old 57% (n=57), followed by age group below 25 years old 16% (n=16), age group 31 to 40 years old 15% (n=15) and the smallest group is group of age 40 to 50 years old 12% (n=12).

3.1 Working Experience

The respondents were divided into five groups according to their working experience. Table 1 below presented the frequency and percentages for the variables of the different working experience groups of the respondents in the study. Total number of respondents was 100 participant and a part of that 51% (n=51) were from a group of 1 to 3 years working experience, which was the largest group of the respondents for working experiences variable. It was followed by the group of four to ten years experiences with the percentage of 24% (n=24), 11 to 20 years working experience was 16% (n=16), more than 20 years working experience 7% (n=7) and the smallest group was a group of less than 1 year of the working experience which presented with 2% (n=2).

Table 1: Working experience information of the respondents (n=100)

Working Experience	Frequency	Percentage (%)
Less than 1 year	2	2
1 - 3 years	51	51
4 - 10 years	24	24
11 - 20 years	16	16
More than 20 years	7	7
Total	100	100

3.2. Stress, strain and coping

The mean scores for Occupational Role Questionnaire (ORQ) show that there are strongly probabilities of maladaptive stress among nurses in IPPT. Meanwhile for Personal Strain Questionnaire (PSQ) the mean scores are within the normal range and the mean scores for Personal Resources Questionnaire (PRQ) shows that there are strong coping resources among nurses in IPPT (Table 2).

Table 2: Descriptive statistics for the OSI-R Scale (n=100)

OSI-R scale	Mean	Std. Deviation
Stress (ORQ)	83.55	9.128
Strain (PSQ)	49.06	10.443
Coping (PRQ)	65.70	9.790

3.3. Stress and age group

The results indicated that for role boundary there are statistically significant differences between age below 25 years with age 41 to 50 years old ($p=0.010$) and group 25 to 30 years old with 41 to 50 years old ($p=0.038$). Staff aged of 41 to 50 years old perceived higher level of role boundary (mean score = 8.33) compare with younger staff, and staff aged 25 to 30 years perceived higher level of role boundary (mean score = 15.96) than staff aged below than 25 years old (mean score = 15.06).

Table 3: Stress and age group (n=100)

OSI-R Scale	Variable	Analysis of variance	
		F ¹	p-value
Stress (ORQ)	Role overload (RO)	.872	.458
	Role insufficiency (RI)	2.006	.118
	Role ambiguity (RA)	.636	.594
	Role Boundary (RB)	4.022	.010*
	Responsibility (R)	2.621	.055

¹F test for equality of variances

*Significant at the 0.05 level

3.4 Stress and working experience

The result presented in Table 4 indicated that there are statistically significant differences between the groups of working experiences in role boundary and responsibility. The role boundary ($p=0.006$), and responsibility ($p=0.020$) showed statistically significant where the p-value is less than 0.05. The results indicate that there is no statistically significant difference between subgroup in role overload, role insufficiency and role ambiguity.

Table 4: Stress and working experience (n=100)

OSI-R Scale	Variable	Analysis of variance	
		F ¹	p-value
Stress (ORQ)	Role overload (RO)	2.051	.093
	Role insufficiency (RI)	1.416	.235
	Role ambiguity (RA)	1.277	.285
	Role Boundary (RB)	3.868	.006*
	Responsibility (R)	3.068	.020*

¹F test for equality of variances

*Significant at the 0.05 level

4. DISCUSSION

Age and working experience is an important contributor to the different perceptions in occupational stress, experienced personal strain and coping resources among the nurses in IPPT. Galdikiene et al [6] reaches a similar result and added the length of works experience is the most influential of stress level. Senior staff perceived higher level of stress relating of role boundary and responsibility. Arash et al [7] also indicates that work responsibility and role duality important factors contributing to job stress among female nurses. Older staff perceived higher level of psychological strain rather than younger staff. The study outcomes similar with study of Luan et al [8] indicating job stress among senior and head nurse, where there are more stress due to nursing profession and work-related issues; time allocation and workload problems.

There were evidences that the number of subgroups perceived vocational stress and personal strain as a result of lack of clarity on organizational and personal objectives. It is recommended that a comprehensive system to manage performance, job rotation and job enrichment should be implemented. This will provide a greater clarity on expected outcomes at all levels and will allowed achievable goals to be set and feedback on performance should be provided regularly.

5. CONCLUSION

Age and working experience is an important contributor to the different perceptions in occupational stress, experienced personal strain and coping resources among the nurses in IPPT. In conclusion, this study shows that there are strongly probabilities of maladaptive stress among nurses in IPPT. Senior staff perceived higher level of stress relating of role boundary and responsibility and low level of stress relating role overload, role insufficiency and role ambiguity. In future further research on exploring stress among nurses should be encouraged. There is also urgency need for organization to handle stress management among nurses.

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