

# JOB STRAIN AMONG NURSES IN A GOVERNMENT HOSPITAL

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## ABSTRACT

Introduction: Nurses are exposed to negative impact of job strain, which may lead to burnout and other health problems. The impact of job strain may influence their productivity and quality of service. Objectives: to determine the level of job strain among nurses and to examine the relationship between job strain with socio-demographic characteristics. Methods: This was a cross-sectional study involved 100 nurses in Hospital Setiu, Terengganu. The study was conducted from April to May 2012. Depression Anxiety Stress Scale-21 items (DASS-21) was used as the main instrument in this study. Descriptive analysis, Kruskal-Wallis and Mann Whitney-U test were used to analyze the data. Results: Most of nurses had moderately low level of job strain (mean = 27.01, SD = 6.14). Significant differences of score median were found between job strain with years of service ( $\chi^2 = 8.418$ ,  $p = 0.015$ ) and monthly family income ( $\chi^2 = 10.841$ ,  $p = 0.004$ ). Conclusion: Nurses with longer years of service and had higher monthly income were usually psychologically competent and able to control their emotional status. Newly graduated nurses should be emphasized to manage their emotional status effectively.

Keywords : DASS-21, job, nurse(s), strain.

## INTRODUCTION

Nurses especially work in hospital-based settings have a difficult and challenging job. Job-related stress is experienced as strain, which can lead to distress, burnout and psychological disorders. Job strain can be described as perception of little control over one's work while facing high job demands, places an individual at increased risk of burnout and depression (Nauret, 2006). Stress is mental pressure for an individual facing a lot of problems from environmental and social well-being which may lead to many diseases (Redhwan *et al.*, 2009). Depression, anxiety and stress have been recognized as important outcome measures in various work environments (Bennett, 2001; Caplan, 1994). Mental health affects physical health, job performance and healthcare utilization (Patti *et al.*, 2007).

A significant correlation exists between overall nursing stress scores and psychiatric symptoms (Parikh *et al.*, 2004). A study conducted in USA revealed that 23% of respondents from various occupations suffered from stress which included 27% of district nurses and 22% practice nurses (Demerouti *et al.*, 2000). The study done by Harny (2001) showed the prevalence of job stress was 23.7% among nurses in a teaching hospital in Kelantan.

Healthcare staff can suffer from job stress as a result from organizational factors and imbalance of job demands, skills and social support at work place (Marine, 2009). High demand and low control combine to produce stress in a variety of work situations for both men and women (Wang *et al.*, 2008). A situation such as working in a noisy environment may not be sufficient to produce stress, except when it is combined with other workplace factors such as rotating shift work (Cottington & House, 1987). Problems may arise from job strain spilling over the family system intruding into the workplace (Ilies *et al.*, 2007). Women are often encounter stress because the increased burden of doing work associated with their multiple roles as an employee, wife and mother (Barnett & Hyde, 2001; Schnittker, 2007). Women with children and no partner are especially burdened and therefore stressed (Livermore & Powers, 2006). As a result, increases in the intensity and level of work collectively with increase in social and psychological demands are having negative effect on their health (Kramer, 2001). It was necessary to help nurses evaluate their job strain level, to identify factors of job strain in which nurses needed assistance. Thus, the aim of the study was to determine the level of job strain among nurses and to examine the relationship between job strain with socio-demographic characteristics.

## METHODS

This cross sectional study took place in all unit/ department of Hospital Setiu, Terengganu, between 15<sup>th</sup> April and 15<sup>th</sup> May 2012. Convenience sampling was used where 100 subjects were selected because of their expediency, accessibility and proximity to the researchers.

The researchers adhered to the confidentiality regulations of the participating hospital which include National Malaysia Research Registration (NMRR) regulations. The study was reviewed by the Institutional Review Board of Universiti Teknologi MARA

(UiTM) and the participating hospital. The ethical consent was also obtained from each respondent before data was collected. Respondents were given 15-20 minutes to fill up the questionnaire independently. Data was self administered.

## **Instrument**

### ***Depression Anxiety Stress Scale 21 items (DASS-21)***

The validated and translated Malay version of DASS-21 screening test questionnaire was adopted from Musa, Fadzil and Zain (2007) to gather information about the levels of depression, anxiety and stress of nurses. The 21-items of DASS measures distress level and each measure consists of seven items. The total score ranges from 0 to 63 and the total for each subscale ranges from 0 to 21 (Lovibond & Lovibond, 1995). All subscales showed high internal consistency (Cronbach's alpha for depression = 0.87, anxiety = 0.85, stress = 0.90).

## **Statistical analysis**

All the data were analyzed using Statistical Package Social Science version 17.0 (SPSS 17.0). Kruskal-Wallis and Mann Whitney-U test was used to examine relationship between nurses' characteristics and total DASS.

## RESULTS

Socio-demographic characteristics of the nurses involved in this study are illustrated in Table 1. All of them are female nurses and have education level of diploma. Mean of age, years of service and family income were 33.2 years, 33 years and RM2467.50, respectively.

**Table 1: Socio-demographic characteristic of nurses (n=100)**

<b>Variables</b>	<b>n/Percentage</b>
<b>Age</b>	
<30	39
31 – 40	48
>41	13
<b>Years of Service</b>	
<10	64
11 – 20	29
>21	7
<b>Marital Status</b>	
Unmarried	20
Married	76
Widowed/ separated	4
<b>Number of Children</b>	
0	33
1 – 2	40
>2	27
<b>Monthly Family Income</b>	
<RM2500	31
RM2501 – RM3000	56
>RM3000	13
<b>Presence of Co-morbid disease</b>	
Yes	10
No	90

### Objective 1: Level of job strain among nurses

Referring to Table2, the overall result showed respondents have a moderately low level of job strain with mean = 27.01 (SD 6.14)

**Table 1: Level of job strain**

<b>Variable</b>	<b>n</b>	<b>min</b>	<b>max</b>	<b>mean</b>	<b>SD</b>
Total DASS score	100	21	54	27.01	6.14

### Objective 2: Relationship between job strain with socio-demographic characteristics

Table 3 presents the result for relationship between DASS-21and socio-demographic variables. There was no significant difference of job strain between different age ( $\chi^2 = 3.763$ ,  $p = 0.152$ ) marital status ( $\chi^2 = 1.848$ ,  $p = 0.397$ ), number of children ( $\chi^2 = 3.371$ ,  $p = 0.185$ ) and co-morbidities ( $\chi^2 = 338.50$ ,  $p = 0.198$ ). However, significant differences of score median in job strain were found between different groups of years of service ( $\chi^2 = 8.418$ ,  $p = 0.015$ ) and monthly family income ( $\chi^2 = 10.841$ ,  $p = 0.004$ ).

**Table 3: The relationship between job strain and nurses' characteristics (n=100)**

Variables	Mean rank	$\chi^2$	p
<b>Age</b>			
<30	43.71	3.763	0.152
30 – 40	55.76		
>40	51.46		
<b>Years of Service</b>			
<10	45.66	8.418	0.015*
10 – 20	63.48		
>20	40.93		
<b>Marital Status</b>			
Unmarried	44.33	1.848	0.397
Married	51.42		
Widow	63.88		
<b>Number of Children</b>			
0	43.33	3.371	0.185
1 – 2	52.18		
>2	56.32		
<b>Monthly Family Income</b>			
<RM2500	36.65	10.841	0.004*
RM2501–RM3000	57.92		
>RM3000	51.58		
<b>Presence of Co-morbid disease</b>			
Yes	49.26	338.50	0.198
No	61.65		

\* P< 0.05

## DISCUSSION

From the analysis, there was moderately low level of job strain among nurses. There was no significant difference of score median between different level of job strain with most of the different groups of socio-demographic characteristics, and significant differences of score median were only found between job strain with monthly family income and years of service.

The study stated that the level of job strain was moderately low. The relationship might be due to the workloads, Hospital Setiu was a smaller district hospital compared to General Government Hospital, therefore Hospital Setiu only received mild cases, compared to other Government Hospitals where they have to treat and receive severe, chronic cases which demands a large number of staff and increased workload.

Analysis of job strain level based on number of years in service showed that nurses who worked longer had lower score median values. This result agrees with the study done by Humpel and Caputi (2001) that found out the significant relationship between stress, depression and years of experience. Both study showed that nurses with longer years of service are usually emotionally competent and able to manage stress and depression better. A study done in Israel also showed the same result as this study, where income or socioeconomic status influences how nurses can cope with stress, as nurses with lower family income usually experience more frequent personal exhaustion (Ayalon, 2008). This suggests that level of job strain among nurses who work in government hospitals was also related to other factors, and not only workload and working environment. The result of this study does not contradict with article written by Sharifah Zainiyah *et al.* (2009) which discussed about nurses facing mental problems at workplace with influence of other possible reasons.

Finding of this study indicated that there still a need to provide steps to reduce the job strain among nurses especially to newly graduate to avoid any negative consequences. All nurses must play their parts to reduce this problem. Only then, nursing profession will be able to promote patients' safety in clinical setting and they will be more prepared to fulfill their role as a nurse. The organization must place senior and junior nurses in each time or shift to complete their task in order to decrease the workload and reduce the job strain. As all tasks can be divided to more than one staff, for example to give medication and dressing patients can be done by two nurses, this can prevent the potential of giving wrong medication to patients because nurses will have more time to complete their task. Nurses who had personal and financial problems that influenced on their work performance should be referred to counselors for counseling sessions. Mental Health Clinic has their important role here, where they have to create the programs and courses that can help and support nurses with severe job strain.

## CONCLUSION

In conclusion, job strain had affected nurses, with different type of factors. From this study, it can be concluded that significant differences of score median of job strain were found in monthly family income and years of service. In addition, the result showed that there was a sign of job strain occurred among the nurses who worked in government hospital but the

result was moderately low level. Future research should include more sample size in order to get a true picture of mental health status among nurses. Thus, the result can be generalized to the whole population.

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