

# STRESS AND PHYSIO-PSYCHO-SOCIAL SYMPTOMS AMONG A PUBLIC UNIVERSITY'S NURSING STUDENTS DURING CLINICAL POSTING

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## ABSTRACT

Clinical posting is the most important part in nursing education, requiring knowledge, skills, and the right attitude to facilitate the development to be a professional nurse. However, clinical posting was found to be the most stressful phase for nursing students throughout their education process in most countries. As nursing students enter the real hospital environment with the lack of knowledge and nursing skills, their health can be affected. The aim of this study is to assess the level of stress and physio-psycho-social symptoms among nursing students in a public university during clinical posting. This cross-sectional study design involved 181 undergraduate nursing students who had completed their clinical posting in a government hospital. The results showed that the nursing students experienced stress most of time especially during their clinical posting. The most common cause of stress was from the workload and assignment and the most common response to stress was behavioral symptoms. This study revealed that the residence where these students lived had significance with the level of stress during their clinical posting ( $p=0.01$ ). Detecting early stress events, creating more effective environment and understanding the effectiveness of coping behaviors may help nursing educators reduce the negative effects of stress which will altogether help students handle stress more effectively.

**Keywords:** *Stress, Nursing students, Physio-psycho-social symptoms, Clinical posting*

## INTRODUCTION

In the nursing curriculum, nursing students need to complete their clinical and theoretical courses to prepare themselves as professional and competent nurses in future. Merdiye & Rengin (2008) have stated that clinical posting is an opportunity for nursing students to improve their psychomotor skills. Bisholt *et al.*, (2014) also agreed that clinical practice is an essential prerequisite condition in the education and training of competent professional nurses.

However, most studies reported that clinical posting to be the most stressful and anxiety-provoking component of the undergraduate nursing program (Nelwati *et al.*, 2012; Chan 2009). According to Shaban *et al.*, (2012) baccalaureate nursing students experience

a higher level of stress than the students in other health-related fields. There are three main stressors for students during the clinical posting; stress from taking care of patients; assignments and workload and stress from teachers and clinical staff (Liu *et al.*, 2015; Khater, Akhu-zaheya & Shaban, 2014).

Sheu *et al.*, (2002) found that nursing students who have been exposed to prolonged stress may experience bad impacts on their clinical learning as well as their health. Shue *et al.*, (2001) stated that nursing students' reactions to stress during their clinical posting encompassed physical symptoms, emotional responses and social behaviors. Shaban *et al.*, (2012) also highlighted that baccalaureate nursing students often experience high level of stress during training which may result in psychological or emotional impairment

during their professional life, ultimately affecting the quality of patient care they provide. Other than that, high level of stress will affect the students' mind, body and behavior in many ways. Moreover, effect of stress varies for each individual resulting in psychological distress, physical complaints, behavioral problems and poor academic performance (Sharma & Kaur, 2011).

Physical symptoms such as increased heart rate, high blood pressure, headache and ulcer are commonly experienced by these nursing students during their clinical posting (Shaban *et al.*, 2012). However, this result defers with the study by Chen *et al.*, (2015) which found that most prevalent depressive symptoms among junior college nursing students were emotional symptoms. Another response of stress developed by nursing students was social behavioral symptoms, which triggers unhealthy behaviors such as smoking, drinking and drug abuse (Shaban *et al.*, 2012; Sharma & Kaur, 2011).

A previous study by Seyedfatemi *et al.*, (2007) reported that the physio-psycho-social response experienced by the nursing students during clinical posting carried significant risks during nursing care delivery.

## **MATERIALS AND METHODS**

### **Research Design**

A cross-sectional descriptive study design by means of self-administered questionnaires was conducted.

### **Setting and Sample**

A total of 181 nursing students undertaking diploma and degree from a public university in Selangor participated in this study. These students completed their clinical posting at any one of the 4 government hospitals with the length of clinical practice of 6 to 14 weeks under the supervision of a clinical instructor (CI). Each of the CI may have 7 to 15 students for each ward or each posting to supervise and evaluate their practices based on the Malaysian Nursing Board guideline.

On the day of data collection, respondents were gathered in group according to their semester in a lecture hall and were briefly explained regarding the study. After the consent form was collected, students were given 15-20 minutes to answer the questionnaire

regarding all stressful events they encountered, physio-psycho-social symptoms that occurred, and behaviors they employed to handle the stress during the whole period of initial clinical practice.

### **Instruments**

The study utilized a self-reported questionnaire consisting of three sections. The first section collected demographic characteristics such as the student's age, semester, level of education, location of clinical placement, residence during clinical practice and the student's perception regarding their interest in nursing profession. Additional information about their family occupations related to health and not related to health and economy status were also included.

The second section was the Perceived Stress Scale (PSS), adapted from Sheu *et al.*, (2002) used to assess the nursing students' stress level consisting of 30 questions using a 5 point Likert-type scale grouped into six factors including stress from taking care of patient, stress from teacher and clinical staff, stress from assignment and workloads stress from peers and daily life, stress from lack of professional knowledge and skills and stress from the environment.

The third section comprised of the Physio-Psycho-Social Response Scale (PPSRS) which was used to explore the nursing students' symptoms of physical, emotional and social behaviors which occurred during their clinical posting. The given choices for each question in this section was based on 5-point Likert Scales.

### **DATA ANALYSIS**

The data were collected and analyzed by using the IBM Statistical Packages for Social Science (SPSS) for Windows, version 20. The mean, standard deviation, and percentage were used to examine the data related to the level of stress and physio-psycho-social status among nursing students during clinical posting. Therefore, the Non-parametric statistic and Kruskal-Wallis Test were used to identify the association between level of stress and socio-demographic characteristics.

## **RESULTS**

### **Participants' Characteristics**

181 students agreed to participate in this study. Majority of them were female students, constituting 87.3%

(*n*=158) while 12.7% (*n*=23) were male students. The range of age was between 20 and 24 years old with a mean of 20.93 years (SD=1.33). More than half of the students were nursing degree students (56.9%, *n*= 103) and the rest of the students involved were nursing diploma students (43.1%, *n*=78). Furthermore, 28.7% (*n*=52) of the students were in semester 2-6, while 13.8% (*n*=52) of them were from semester 8. About 41.4% (*n*=75) of the students were placed in Hospital Ampang during their clinical posting, followed by 26.0% (*n*=47) in Hospital Selayang, 19.9% (*n*=6) in Hospital Sungai Buloh and 12.7% (*n*=23) of them in Hospital Tengku Ampuan Rahimah. Majority of these students lived in the residence college (70.7%, *n*=128) while the rest of 29.3% (*n*=53) were non-college residence during these clinical posting. A total of 82.9% (*n*=150) students were interested in nursing profession while 17.1% (*n*=31) were not (Table 1).

**Table 1: Demographic Factor**

Variables		Frequency ( <i>n</i> )	Percentage (%)
<b>Age</b>	Mean = 20.95 (SD=1.33)		
	19	24	13.3
	20	52	28.7
	21	53	29.3
	22	20	11.0
	23	28	15.5
<b>Gender</b>	Female	158	87.3
	Male	23	12.7
<b>Level of Education</b>			
	Diploma	78	43.1
	Degree	103	56.9
<b>Semester</b>			
	Semester 2	52	28.7
	Semester 4	52	28.7
	Semester 6	52	28.7
	Semester 8	25	13.8
<b>Clinical Placement</b>			
	Hospital Ampang	75	41.4
	Hospital Sg Buloh	36	19.9
	Hospital Tengku Ampuan Rahimah	23	12.7

	Hospital Selayang	47	26.0
<b>Residence During Clinical Practice</b>			
	College Residence	128	70.7
	Non-Residence	53	29.3
<b>Interest in Nursing</b>			
	Yes	150	82.9
	No	31	17.1
<b>Family Occupation</b>			
	Related to Health	25	13.8
	Not Related to Health	156	86.2
<b>Economy Support</b>			
	Family Support	36	19.9
	Loans	137	75.7
	Scholarships	8	4.4

**Level of stress among nursing students during clinical posting**

The overall mean of the level of stress was 2.89 (SD=0.59). The most stressful events were due to stress from the workload and assignment with the mean of 3.16 (SD=0.75) followed by stress due to lack of professional knowledge and skills with the mean of 2.93 (SD=0.69), stress from peers and daily life with the mean of 2.82 (SD=0.81), stress from taking care of patients with the mean of 2.81 (SD=0.62), stress from teachers and clinical staff with the mean of 2.80 (SD=0.78) and lastly stress from the environment with the mean of 2.72 (SD=0.75) (Table 2).

**Table 2: Level of stress by nursing students during clinical posting**

Variables	Mean	Standard Deviation	Item Ranking
<b>Overall</b>	<b>2.89</b>	<b>0.59</b>	
<b>A. Stress from taking care of patients</b>	<b>2.81</b>	<b>0.62</b>	<b>4</b>
Lack of experience and ability in providing nursing care and in making judgements	3.02	0.72	
Do not know how to help patients with physio-psycho-social problems	2.91	0.76	
Unable to reach ones' expectations	2.91	0.76	
Unable to provide appropriate responses to doctors, teachers, and patients' problems	2.77	0.74	
Worry about not being trusted or accepted by patient or patients' family	2.78	0.92	
Unable to provide patients with good nursing care	2.50	0.83	
Do not know how to communicate with patients	2.39	0.90	
Experience difficulties in changing from the role of a student to that of a nurse	2.78	0.85	

<b>B. Stress from teachers and clinical staff</b>	<b>2.75</b>	<b>0.75</b>	<b>5</b>
Experience discrepancy between theory and practice	3.10	0.87	
Do not know how to discuss patients' illness with teachers, and medical and nursing personnel	2.71	0.82	
Feel stressed that the teacher's instruction is different from one's expectation	3.12	0.93	
Medical personnel lack empathy and are not willing to help	2.66	0.90	
Feel that teachers do not give fair evaluation on students	2.34	0.98	
<b>C. Stress from assignments and workload</b>	<b>3.16</b>	<b>0.75</b>	<b>1</b>
Worry about bad grades	3.51	1.10	
Experience pressure from the nature and quality of clinical practice	3.23	0.97	
Feel that one's performance does not meet teachers' expectations	3.17	0.83	
Feel that the requirements of clinical practice exceed one's physical and emotional endurance	3.04	0.84	
Feel that the dull and inflexible clinical practice affect one's family and social life	2.88	0.78	
<b>D. Stress from peers and daily life</b>	<b>2.82</b>	<b>0.81</b>	<b>3</b>
Experience competition from peers in school and clinical practice	2.90	0.91	
Feel pressure from teachers who evaluate student's performance by comparison	2.98	1.03	
Feel that clinical practice affects one's involvement in extracurricular activities	2.77	1.00	
Cannot get along with other peers in the group	2.25	0.91	
<b>E. Stress from lack of professional knowledge and skills</b>	<b>2.93</b>	<b>0.70</b>	<b>2</b>
Unfamiliar with medical history and terms	2.92	0.76	
Unfamiliar with professional nursing skills	2.91	0.75	
Unfamiliar with patients' diagnoses and treatments	2.94	0.75	
<b>F. Stress from the environment</b>	<b>2.72</b>	<b>0.75</b>	<b>6</b>
Feel stressed in the hospital environment where clinical practice takes place	2.61	0.81	
Unfamiliar with the ward facilities	2.62	0.83	
Feel stressed from the rapid change in patient's condition	2.65	0.81	
Transportation between home and hospital	2.50	1.04	
Having to be early in the hospital (7am)	3.06	1.23	

**Physio-Psycho-Social Symptoms among nursing students during clinical posting**

The physio-psycho-social symptoms that occurred among nursing students during clinical posting were minimal (Mean=1.96, SD=0.75). Social behavioral symptoms were the most common symptoms among the students with the mean of 2.17 (SD= 0.87), followed by emotional symptoms (Mean=2.13, SD=0.96) and lastly the least symptom showed by nursing students during their clinical posting were physical symptoms with the mean of 1.76 (SD=0.82). There were two items with the highest means of 2.50.

These were difficulty in making decision and secondly, they were usually worried and nervous (Table 3).

**Table 3: Physio-Psycho-Social Symptoms**

Variables	Item Ranking	Mean	Standard Deviation
<b>Overall</b>		<b>1.96</b>	<b>0.75</b>
<b>Physical Symptoms</b>		<b>1.76</b>	<b>0.82</b>
I often feel giddy		2.14	1.02
I experience nausea and vomiting		1.67	0.90
I often have vertigo and feel dizzy	3	1.76	0.85
I feel pressure in the chest		1.64	0.80
My fingers and toes feel numb and stab		1.68	0.82
I have stomach ache and diarrhea		1.90	1.01
I have difficulties in breathing without any reason		1.55	0.83
I catch cold more often		1.66	0.94
<b>Emotional Symptoms</b>		<b>2.13</b>	<b>0.96</b>
I tend to be worried and nervous		2.50	1.01
I tend to be nervous and anxious lately		2.38	1.02
I often feel blue and depressed	2	1.90	1.01
I feel afraid without any reason		2.06	1.04
I feel I am going to have a nervous breakdown		2.01	1.13
I feel more anxious lately		1.96	1.00
<b>Social Behavioral Symptoms</b>		<b>2.17</b>	<b>0.87</b>
I am not optimistic about my future		2.16	0.98
My life is not quite colorful		2.02	1.03
I cannot work as usual	1	1.97	0.91
I have difficulty in making decisions		2.50	0.93
I do not feel needed or valued		2.04	0.96
I cannot think clearly as before		1.98	0.95

**The association between the levels of stress with student's demographic characteristics**

The results of the association showed that there were statistically significant associations between level of stress and demographic factors of residence during clinical posting including college residence and non-college residence, which showed  $p=0.05$ , in which  $p<0.05$  shows a significance between both factors in Table 4. Therefore, there was an association between total levels of stress with student's demographic characteristics.

**Table 4: An association between level of stress and students' demographic factors during clinical posting**

Variables	N	Mean Range	Asymp sign p-value	Df
<b>Residence During Clinical Practice</b>				
College Residence	128	87.36		
Non-Residence	53	101.31	0.056	1

## DISCUSSION

The results of this study showed that the most common type of stressors among nursing students during clinical posting is mainly due to assignments and workload, followed by stress from lack of professional knowledge and skills along with stress from peers and daily life. Stressors like taking care of patients, teachers and nursing staff and clinical environment were rarely found. There are several previous studies which show similar results with the current study (Akhu-zaheya, Shaban & Khater, 2015). Shaban *et al.*, (2012) found the stress was mainly from the assignments and workload. On the other hand, a study by Sheu *et al.*, (2002) reported that the main reason for stress came from the lack of professional knowledge and skills during the nursing students' clinical posting.

The results of this study showed that nursing students experience stress with the overall mean of 2.89 which indicated that they experience stress 'some of the times' during the clinical posting. The stress from assignments and workload is triggered by the huge number of assignments that were required to be submitted during clinical sessions including nursing care plan, clinical reflection and case study reports (Liu *et al.*, 2014). In addition, clinical instructors assess the performance of each student, which might have caused additional stress to students. Furthermore, insufficient knowledge and skills when encountering patient care such as dealing with various diagnoses of illnesses, progresses, follow-ups, self-care and adjustments also cause stress.

Seyedfatemi *et al.*, (2007), reported that the high-level stress will affect students' mind, body, and behavior in many ways, and differently. Sharma & Kaur (2011) also stated that stress in nursing students might result in psychological distress, physical complaints, behavioral problems and poor academic performance. Most of the nursing students experienced moderate physio-psycho-social symptoms with the overall mean for the level at 1.96. This study showed that the highest symptoms shown by nursing students as result of stress were social behavioral symptoms, followed by emotional symptoms and lastly the least were physical symptoms. The finding is consistent with the study by Sheu *et al.*, (2002) which reported most of their nursing students presented social behavioral symptoms more than any physical and emotional symptoms. On the other hand, the results of this study contradict to the results of a study by Chen *et*

*al.*, (2014) which reported that change in physical well being among the participants were the highest symptoms. Liu *et al.*, (2015) showed that 65% of nursing students experienced more than one gastrointestinal symptom and 32.1% of students experienced more than three gastrointestinal symptoms over the past clinical practice.

Based on this study, it was found that there is an association between the level of stress with students' demographic factors where nursing students in college residence during clinical posting with a value of  $p < 0.05$  stated. The nursing students who were non-residence during clinical posting experienced higher stress than the students who were college residence. The nursing students might face difficulty to attend the clinical posting because they need to wake up early in the morning at 4am to fulfill the long journey to the hospital as majority of the students do not have their own transport to commute to the hospital.

Most previous studies have been conducted to review the association between level of stress and students' socio-demographic factors. However, very limited reference in the literature systematically describes the association between residences in college with the level of stress experienced by the nursing students during clinical posting.

This study is inconsistent with the findings of the previous studies reported from other countries. According to Liu *et al.*, (2015), out of all demographic variables regarding the perceived stress among nursing students in the clinical learning environment, only the duration of study was found to have a significant effect on students' stress level.

Apart from that, there was a study conducted in Malaysia showed different results compared to the present study. Kaur *et al.*, (2011) found that there was association only between the year of the study and student's stress. They found that the second-year students in fact claimed to be more stressed than other year groups.

## IMPLICATION

This study is beneficial to nursing students as it can enhance their quality in terms of education and skills. Then, throughout the research, it helps to identify the stress symptoms and its causes during clinical posting.

On the other hand, this study is also beneficial for

the Nursing Education which helps to reduce the physio-psycho-social stress. The outcomes of this research can be used as a guideline in planning a more effective and reliable solution to overcome the current situation regarding stress during clinical posting among nursing students.

### LIMITATIONS

The respondents who participated in this study were dominated by female students than male students due to the less number of male students studying nursing courses. As a suggestion for future studies, it is better to include nursing students from various types of institutions from public universities, private universities and the nursing colleges under the Malaysia's Ministry of Health.

### RECOMMENDATIONS

According to the findings in this study, a few parties should take responsibilities regarding the actions taken to deal with this present problem. The lecturers should encourage their nursing students to practice nursing skills in laboratory more often as the skills can only be

polished with more and more practice. Also, clinical instructors need to provide better guidance to students during their attachments period in hospitals. Therefore, in this manner it helps to gradually reduce the level of stress among nursing students during clinical posting.

Lastly, in future, more studies should be conducted in a larger scale by other universities in Malaysia to find out the pattern of stress, physio-psycho-social symptoms and coping skills among nursing students during clinical practice.

### CONCLUSION

The result in this study confirmed the presence of stress among nursing students during clinical postings. Most of the students experienced some form of stress. The common causes of stress are mainly due to assignments and workload, lack of professional skills and peers. The students often show social behavioral changes during stress. Therefore, there is an association between the level of stress and student's demographic-factors in which non-resident students experience a greater level of stress than the resident students.

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