Journal of Nursing Science
Journal homepage: www.jns.vn

ARTICLE RETRACTED: "Stress, physio-psycho-social status and coping behaviors in clinical practice of nursing students at Duy Tan University"

Ho Thi Lan Vi[1], Yi-Chuan Chang[2], Nguyen Thi Hong Hanh[1]
[1]Duy Tan University, Viet Nam; [2]Department of Nursing, Fooyin University, Taiwan

ABSTRACT

***Objectives**: To describe the stress, physio-psycho-social status and coping behaviors of nursing students in clinical practice; To describe the differences in stress, physio-psycho-social status and coping behaviors among nursing students of different demographic factors; Exploring the relationship between students' stress, physio-psycho-social status and coping behavior. **Methods**: Using a descriptive, cross - sectional design. The subjects were 378 nursing students who had finalized their clinical practice at Duy Tan University for the semester. Three standardized instruments were used, the Perceived Stress Scale (PSS), the Physio-Psycho-Social Response Scale (PPSRS) and the Coping Behavior Inventory (CBI). **Results**: Results showed that "assignments and workload" were the highest sources of stress in clinical practice (1.80 ± 0.68). The highest symptom response to stress was emotional symptoms (1.60 ± 0.89). The main coping behaviors was "transference" (2.55 ± 0.84). Interest in nursing, academic year were a significant difference in perceived stress, physio-psycho-social status and coping behaviors ($p < 0.05$). Significant positive correlations between perceived stress, physio-psycho-social status, coping behavior were found ($p < 0.05$). **Conclusions**: These results are imperative for supporting nursing education in clinical practice to take methods to supply a helpful environment in order to decrease nursing students' stress, warrants further interventions from both clinical teachers and clinical staff. Effective intervention planning and strategies are needed to decrease or prevent stress in nursing education and training.*

***Keywords**: Nursing students, stress, coping behavior, physio-psycho-social status, clinical practice.*

INTRODUCTION

Stress is a non-specific biological response of the body to stressful situations. Stress can stimulate positivity and mobilize strength to help people overcome difficulties, but it also has harmful effects if it exceeds the body's ability to respond, causing illness and disease [1].

According to a variety of reports from job-related health organizations, stress influences almost every occupation. However, the level of stress was higher and there was more stress in health experts, especially nurses, with negative health outcomes [2]. Especially, in the stage before becoming professional nurses, it is their

Cor. author: Ho Thi Lan Vi
Email: hothivilan@gmail.com
DOI: 10.54436/jns.2025.01.959
Received: Jan 20, 2025
Accepted: Feb 19, 2025
Published: Feb 20, 2025

training time that reasons a substantial total of stress. Nursing students undergo and state high levels of stress as they learn nursing curriculum [3]. The level of stress in university and medical students, showing that nursing students report higher levels of stress than medical, pharmacy, therapy, dental and graduate students [4]. Nursing students not only face university stress but also face stress throughout clinical training, they have high levels of stress [5]. According to Vu Dung, the stress score of nursing students at Thang Long University, Vietnam was 32% of students had high stress levels [6].

Research on stress and its impact on students has received considerable attention over the years [7, 8]. In nursing programs, nursing students have to complete practice in clinical and academic programs in preparation for becoming a professional and competent nurse in the future. Hospital practice is a crucial stipulation for training and teaching of experienced expert nurses. Clinical practice is an essential section of nursing curriculums. The clinical section of nursing curriculum would participate psychometric (doing, skills) and the sentimental (knowing) side of studying [9]. Hospital practice gives nursing students the chance to improve the knowledge they need and gain the psychological skills required for their career development [10]. In almost all nursing programs, students use about half their time practicing clinical training. It is disturbing that students assessment clinical teaching as extremely taxing [11].

Nursing students experienced and disclosed stress increases throughout their nursing curriculum [3, 12, 13]. Nursing students experience high levels of stress through clinical practice [14]. The research of stress in nursing clinical education has recognized many stressors. Workload and assignments are the highest causes of stress for nursing students in clinical practice [14, 15]. The nursing program was not sufficiently prepared for students to solve clinical problems, long clinical hours, the gap between theory and practice which lead to stress for nursing student in clinical [16, 17]. Another stressor come from personal factors which include lack of knowledge and skills in providing nursing care, do not know how to help patients with physio-psycho-social problems [14, 16]. The other sources of stress were caused by the clinical environment include unfamiliar with the ward facilities or using new technical equipment, feel stressed from the rapid change in patient's condition, seeing the pain and suffering of patients, and deal with dying or seriously ill patients [16, 18]. In addition, the relationships with teacher and nursing staff also emphasized as stressor which compose unable to discuss patients' illness with teachers, fear not meet teachers' expectations, teachers who evaluate students' performance by comparison, criticism senior staffs, and being criticizes in front of patient [16, 19].

Nursing students need an effective stress management skills to cope with demands of clinical practice. Most of the research approaches responded to Folkman and Lazarus model which identified coping as a stable aspect that can help people preserve social psychological coping skills in stressful situations [20]. Individuals use both positive and negative strategies to cope with stress; positive strategies indicate active engagement with individual stressors and are associated with lower stress levels; while, negative strategies indicate disengagement and often result in higher stress levels [21]. Results from the research on coping behavior of nursing students show the most popularly utilised

positive coping strategies include problem-solving behavior, transference and staying optimistic while avoidance as a negative strategy was the least regularly used [15, 16].

Stress affects all individuals and has a profound impact on one's mind and health and well-being. Response to stress include physiological responses, psychological reactions and social behavioral responses. The psychological condition of nursing students has an instant effect on their daily lives, educational achievement, quality of their nursing care and even the stability of the nursing group. According to several studies show the most common reaction to stress was behavioral symptoms [22]. Physical symptoms such as increased heartbeat, hypertension, headache and ulcers are often experienced by nursing students, another response of stress developed by nursing students was social behavioral symptoms, which triggered unhealthy behaviors such as smoking drug and drinking use [23].

In addition, some studies found that there were significant differences between interest in Nursing, academic year and student's perception of stress, coping behaviors [23, 24].There was statistically significant correlation between overall stress level and physio-psycho-social symptoms, coping behaviors [24]. That should be explored further.

It affects them physiologically, psychologically and socio behaviorally. This psychological stress can interfere with the student's academic achievement and thus impede the pursuit of their nursing care, but there is less study about that. In Vietnam, almost all research is about the prevalence of stress in students not about the source of stress, physio-psycho-social status or handling behaviors for stress. Therefore, the aim of this research is to understand the level of the stress, physio-psycho-social status and coping behaviors of nursing students in clinical practice, identify related factors and explore the relationship between them.

This study seeks to profit researchers and nursing educators. To explore the source of stress and stressful experiences of nursing students so that they can prevent unwanted effects arising in the present state of health care. Organizing interventions to raise the student's competence to respond to stress in professional education is critical and provide them with increased protection for their social health development.

For researchers, in Vietnam the research on stress of a nursing student in clinical practice is limited, so this study provided the necessitated data to the researchers upcoming to use the database to compare, it may be used as an significant reference for further researchs

MATERIALS AND METHODS

Study Design and participants:

Participants: The study was conducted on nursing students at Duy Tan University.

Inclusion criteria: was baccalaureate nursing students at Duy Tan University (Faculty of Nursing) being actively participated in the program from the 2nd year to the 4th year who had finished their clinical practice, and accepted to take part in this research. Accordingly, the Bachelor's nursing curriculum at Duy Tan University where clinical practice begins in the second year.

Exclussion criteria: Nursing students who were taking time off from the program or who had not attended class during data collection were also excluded.

Study duration and location:

From January 2024 to April 2024 at Duy Tan university in Vietnam.

Study design:

A descriptive correlational cross-sectional study was conducted.

Sample size:

Nursing students from 2nd to 4th year comprised the study's population. The sample size was calculated as 343 using the G*Power 3.0.10 sample calculation program with a two-tailed independent t -tests/ Pearson correlation, an alpha level of 0.05, effect size of 0.15, and power of 80.0%. In consideration of a 10% loss, 378 students were randomly selected from this sample frame.

Sampling method:

Stratified random sampling used in this study. The population of nursing students was first divided into strata based on their academic year (2nd, 3rd, and 4th years). The total number of nursing students at Duy Tan University was 803 (with 207 in the 2nd year, 187 in the 3rd year, and 202 in the 4th year). The number of students selected from each year was calculated proportionally based on the total number of students in each year (132 from the 2nd year, 117 from the 3rd year, and 129 from the 4th year). To randomly select the sample: 2nd Year: Select all 6 classes, each consisting of 22 students. 3rd Year: Select 2 classes, each consisting of 24 students. Number each class from 1 to 5, then use Epi Info 6 and choose Epitable to randomly select 2 classes (Class 2 and Class 3). The remaining classes (Class 1, 4, and 5) will each include 23 students. 4th Year: Select 1 class consisting of 25 students. Number each class from 1 to 5, then use Epi Info 6 and choose Epitable to randomly select 1 class (Class 4). The remaining classes (Class 1, 2, 3, and 5) will each include 26 students. Selecting the Research Subjects in Each Class: Number the students from 1 to N in each class, then use Epi Info 6 and choose Epitable to randomly select research subjects within each class.

Research instruments:

The Perceived Stress Scale (PSS) was developed by Sheu et al. (2002) to examine the stress and stress levels of nursing students. It contains 29 items with a 5-point scale. 5 answer choices ranged from "never" to "always" and are scored from 0 to 4. The items were grouped into six elements related to stressful sources. To determine the level of stress, the following scaling was used: 2.67 – 4.00 for High Stress, 1.34 – 2.66 for Moderate Stress, and 0 – 1.33 for Low Stress [25] . The reliability of this questionnaire shows that Cronbach alpha is 0.86-0.89 [11, 25]. In the recent research, Cronbach's alpha was 0.920 with a two-week test-retest reliability of 0.915.

The Physio-Psycho-Social Response Scale (PPSRS): This instrument was also developed by Sheu et al. (2002), with 21 items Likert scale of 5. Five answer choices ranged from "never" to "always" and are scored from 0 to 4. The symptoms related to the physical, psychological and social health of the student. To determine the level of stress, the following scaling was used; 2.67 – 4.00 for Poor Health Status, 1.34 – 2.66 for Good Health Status, and 0 – 1.33 for Best Health Status. The Cronbach alpha is 0.90 with a test week reliability of 0.72 [25]. Cronbach's alpha coefficient of the Turkish version was 0.91 with a two-week reliability check for 0.92 [25]. In the recent

research, Cronbach's alpha was 0.933 with a two-week test-retest reliability of 0.924.

The Coping Behavior Inventory (CBI): This instrument was also developed by Sheu et al. (2002), it determines the coping approaches of nursing students. It contains 19 items on a Likert scale of 5. Five answer choices ranged from "never" to "always" and are scored from 0 to 4. Nineteen items on the scale were divided into four parts. Higher scores for each aspect show more regular and effective use of a given kind of behavioral response. The reliability of the instrument was assessed in various studies and showed Cronbach's alpha coefficient of 0.76 -0.80 [11, 25]. In the recent research, Cronbach's alpha was 0.745 with a two-week test-retest reliability of 0.742.

Process of Questionnaire Translation: the translation processes were knowledgeable by the International Test Commission Guidelines.

• In stage 1: Forward translation to Vietnamese: Two bilingual Vietnamese people who were individually asked to translate the original scale into Vietnamese. The two people were chosen with the following criteria: One translator that was known the concepts the instruments mean to measure, to give a translation that more nearly look like the original instruments. And naive translator, who was known the aim of the instruments, create the second translation so that the indirect differences in the original instruments may be noticed. Inconsistencies between the two translators were deliberated and determined.

• In stage 2: Backward translation: The first translation individually back-translated to English. One bilingual American was separately asked to translate the Vietnamese version scale into English. Back-translators were known the intentional concepts the questionnaire measures. After comparing this translation and the original, it was checked for any confusing, misleading or meaningful content. Then adjusted the Vietnamese version accordingly, consistent and provided a translation of the most appropriate Vietnamese version.

• In stage 3: Preliminary pilot testing. The Vietnamese version of the translated instruments should be pilot examined on a little sample (30 students) of the anticipated respondors. After finalizing the translated instruments, the respondents were asked to intricate what they thought about each instruments item and what their consistent reply meant. The resultant information clarified whether the respondent understood the questions. Volunteers were also asked questions after completing the questionnaire about their feeling of the subject and whether the questionnaire contains any areas too difficult or sensitive, or included any unpleasant information. This process was repeated several times to complete the final translation of the questionnaire. The data from the pilot study questionnaire was processed using statistical software to calculate the validity and reliability of the instruments.

Data Collection: The study conducted at Duy Tan University. The researcher approached students when they finished their clinical practice and expounded the object of the research. Prior to this, participators were notified about the aims and progress of the research, and their questions were answered. Students who were willing to take part in the research were asked to fill in the instruments, and then gave it back it to the researcher. The survey answer period lasted for about 20 minutes.

Data analysis: statistical Package for Social Science (SPSS) for Window version 16.0 was used for data analysis of this research. The participant demographic data was analyzed using descriptive statistics. Mean, standard deviation, frequency and percentage was used to examine the data related to the stress, physio-psycho-social status and coping behaviors of nursing students in clinical practice. T-test and ANOVA were used to compare the differences of students' characteristics with perceived stress, coping behaviors and physio-psycho-social health. Pearson correlation was used to explore the relationship between students' stress, physio-psycho-social status and coping behavior. Results were evaluated within 95% confidence interval, and $p < 0.05$ was considered statistically significant.

Ethical consideration: Permission to use the instruments has been approved by the author. This research was implemented after the approval of the ethics committee of Fooyin University and Duy Tan University principal for study and was allowed to carry out the research by the Dean of the Nursing Department. Researchers clarified the objective of the research and an information sheet with the specifics of the research were supplied. The written consent was received from the participants for interviews and they were free to leave of absence focus groups if they wanted.

RESULTS

Participant Characteristics

Table 1. Demographic data (N = 378)

Variables		n (%)
Age (Mean ± SD)		21.20 ± 1.06
Gender	Female	344 (91.0%)
	Male	34 (9.0%)
Academic year	Second year student	132 (34.9%)
	Third year student	117 (31%)
	Fourth year student	129 (34.1%)
Interest in Nursing	Yes	286 (75.7%)
	No	92 (24.3%)
Family Occupation	Related to health	79 (20.9%)
	Not related to health	299 (79.1%)
Housing	Home	75 (19.8%)
	Dormitory	275 (72.8%)
	Relative's house	28 (7.4%)

A total of 378 students were offered to take part in this study, most of them were female (91%). The mean age of nursing students was 21.2 ± 1.06. Almost all of the students were interested in nursing (75.7%). Non-health related family occupation was 79.1%. The students staying in a dormitory when they practice in clinical was 72.8% (Table 1).

Table 2. Perceived stress by nursing students in clinical practice

Stress factor	Mean	SD	Factor ranking	Item ranking
I. Stress from taking care of patients	1.70	0.60	2	
Lack of experience and ability in providing nursing care and in making judgments	1.91	0.78		7
Do not know how to help patients with physio-psycho-social problems	1.69	0.84		11
Unable to reach one's expectations	1.60	0.78		12
Unable to provide appropriate responses to doctors', teachers', and patients' questions	1.77	0.83		8
Worry about not being trusted or accepted by patients or patients' family	1.94	1.00		6
Unable to provide patients with good nursing care	1.49	0.99		20
Do not know how to communicate with patients	1.14	1.04		25
Experience difficulties in changing from the role of a student to that of a nurse	2.09	0.94		4
II. Stress from teachers and nursing staff	1.41	0.62	5	
Experience discrepancy between theory and practice	2.56	0.84		1
Do not know how to discuss patients' illness with teachers, and medical and nursing personnel	1.49	0.82		17
Feel stressed that teacher's instruction is different from one's expectations	1.43	0.96		19
Medical personnel lack empathy and are not willing to help	1.39	0.99		21
Feel that teachers do not give fair evaluation of students	0.80	0.92		27
Lack of care and guidance from teachers	0.76	0.91		28
III. Stress from assignments and workload	1.80	0.68	1	
Worry about bad grades	2.33	0.95		3
Experience pressure from the nature and quality of clinical practice	2.33	0.93		2

Stress factor	Mean	SD	Factor ranking	Item ranking
Feel that one's performance does not meet teachers' expectations	1.96	1.30		5
Feel that the requirements of clinical practice exceed one's physical and emotional endurance	1.58	0.99		13
Feel that dull and inflexible clinical practice affects one's family and social life	1.30	1.06		23
IV. Stress from peers and daily life	1.06	0.70	6	
Experience competition from peers in school and clinical practice	1.35	0.97		22
Feel pressure from teachers who evaluate students' performance by comparison	1.21	0.92		24
Feel that clinical practice affects one's involvement in extracurricular activities	0.99	0.98		26
Cannot get along with other peers in the group	0.69	0.88		29
V. Stress from lack of professional knowledge and skills	1.49	0.80	4	
Unfamiliar with medical history and terms	1.44	0.88		19
Unfamiliar with professional nursing skills	1.53	0.87		15
Unfamiliar with patients' diagnoses and treatments	1.50	0.90		16
VI. Stress from the environment	1.67	0.77	3	
Feel stressed in the hospital environment where clinical practice takes place	1.72	1.00		9
Unfamiliar with the ward facilities	1.57	0.91		14
Feel stressed from the rapid change in a patient's condition	1.71	0.90		10
Overall perceived stress	1.56	0.51		

The degree of perceived stress by students during their clinical practice ranged from 2 to 87 (45.29 ± 14.70). The level of stress perceived by students during clinical practice was moderate stress (1.56 ± 0.51). The most common type of stress perceived was "stress from assignments and workload" (1.80 ± 0.68). The three stressful events most regularly encountered by students, were "worry about bad grades" (M = 2.33 ± 0.95), "experience difficulties in changing from the role of a student to that of a nurse" (M = 2.09 ± 0.94), "feel that one's performance does not meet teachers' expectations" (M = 1.96 ± 1.30) (Table 2).

Table 3. Physio-psycho-social symptoms occurred during clinical practice

Physio-psycho-social status	Mean	SD	Factor ranking	Item ranking
I. Physical symptoms	1.12	0.64	3	
I often feel giddy	1.53	0.90		6
I experience nausea and vomiting	1.10	0.90		12
I often have vertigo and feel dizzy	1.35	0.96		8
I feel pressure in the chest	0.86	0.82		18
My fingers and toes feel numb and stab	1.02	0.99		14
I have stomachache and diarrhea	0.98	0.87		15
I have difficulties in breathing without any reason	0.96	0.95		17
I catch cold more often	1.13	1.00		11
II. Emotional symptoms	1.60	0.89	1	
I tend to be worried and nervous	1.88	0.98		1
I tend to be nervous and anxious lately	1.83	1.07		2
I often feel blue and depressed	1.55	1.06		5
I feel afraid without any reason	1.51	1.07		7
I feel I am going to have a nervous breakdown	1.27	1.06		9
I feel more anxious lately I cannot calm down	1.55	1.04		4
III. Social behavioral symptoms	1.14	0.80	2	
I am not optimistic about my future	1.58	1.10		3
My life is not quite colorful	1.20	1.10		10
I cannot work as usual	0.96	0.91		16
I have difficulty in making decisions	1.44	0.93		8
I do not feel needed or valued	0.85	0.96		19
I cannot think clearly as before	1.10	0.91		13
A high score represents a bad status	0.84	0.96		20
Overall Physio-psycho-social status	1.26	0.67		

The degree of physio-psycho-social status response ranged from 0 to 75 (26.46 ± 14.06). The physio-psycho-social status reaction which occurred during hospital practice was Best Health Status (1.26 ± 0.67). “Emotional symptoms” were the most symptoms (Table 3).

Table 4. Coping behaviors utilized by nursing students

Factor/item	Mean	SD	Factor ranking	Item ranking
I. Avoidance	0.80	0.69	4	
To avoid difficulties during clinical practice	1.08	0.87		15
To avoid teachers	0.59	0.75		18
To quarrel with others and lose temper	0.69	0.89		17
To expect miracles so one does not have to face difficulties	1.11	1.01		14
To expect others to solve the problem	0.79	0.90		16
To attribute to fate	0.57	0.85		19
II. Problem solving	1.98	0.78	3	
To adopt different strategies to solve problems	1.90	0.92		11
To set up objectives to solve problems	2.06	0.92		8
To make plans, list priorities, and solve stressful events	2.03	0.94		9
To find the meaning of stressful incidents	1.90	1.00		12
To employ past experience to solve problems	2.10	1.00		7
To have confidence in performing as well as senior schoolmates	1.93	1.01		10
III. Stay optimistic	2.18	0.69	2	
To keep an optimistic and positive attitude in dealing with everything in life	2.50	0.96		5
To see things objectively	2.52	0.95		4
To have confidence in overcoming difficulties	2.46	0.94		6
To cry, to feel moody, sad, and helpless	1.25	1.04		13
IV. Transference	2.55	0.84	1	
To feast and take a long sleep	2.52	0.99		3
To save time for sleep and maintain good health to face stress	2.52	0.96		2
To relax via TV, movies, a shower, or physical exercises (ball playing, jogging)	2.60	0.97		1
Overall Coping behaviors intervention	1.74	0.49		

The coping behaviors which nursing student used to decrease stress was between rare and sometimes (1.74 ± 0.49). The most regularly coping behavior of nursing student during hospital practice was "Transference" (2.55 ± 0.84), "Avoidance" behavior was the least frequently employed (0.80 ± 0.69) (Table 4).

The differences in stress, physio-psycho-social status and coping behaviors among nursing students of different demographic factors

Table 5. Analysis of differences in the PSS, PPSRS, CBI scores by interest in Nursing and academic year

Variables	PSS			PPSRS			CBI		
	Mean (SD)	t/F	p	Mean (SD)	t/F	p	Mean (SD)	t/F	p
Interest in Nursing									
Yes	1.48 (0.51)	-5.46	0.000	1.14 (0.63)	-6.66	0.000	1.71 (0.51)	-2.13	0.034
No	1.80 (0.41)			1.64 (0.64)			1.84 (0.39)		
Academic year									
Sophomore (1)	1.49 (0.54)	3.04	0.049 (1) < (3)	1.15 (0.69)	3.57	0.029 (1) < (3)	1.70 (0.61)	2.64	0.073
Junior (2)	1.56 (0.49)			1.26 (0.60)			1.70 (0.38)		
Senior (3)	1.64 (0.47)			1.37 (0.70)			1.82 (0.43)		

Among students in regard to their level of interest in Nursing, there was a significant difference in perceived stress (t = - 5.46, p = 0.000), physio-psycho-social status (t = -6.66, p = 0.000) and coping behaviors (t = -2.13, p = 0.034). There were no statistically significant differences in stress levels, physio-psycho-social status, coping behaviors and housing when students practice in a clinical setting. There were statistically significant differences between their academic year and perceived stress (F = 3.04; df = 2; p = 0.049), physio-psycho-social status (F = 3.57, df = 2, p = 0.029), no difference with coping behaviors (F = 2.64, df = 2, p = 0.073) (Table 5).

There were no statistically significant differences in stress, physio-psycho-social status and coping behaviors of gender; family occupation; housing of student.

The relationship between students' stress, physio-psycho-social status and coping behavior

Table 6. Correlation coefficients of PSS, PPSRS and CBI

Variables	PSS	PPSRS	CBI
PSS	-		
PPSRS	0.599**	-	
CBI	0.320**	0.225**	-

**. $p < 0.01$

Bivariate analysis showed that significant positive correlations between perceived stress and Physio-psycho-social status ($r = 0.599$, $p = 0.000$), perceived stress and Coping behavior ($r = 0.320$, $p = 0.000$), Physio-psychosocial status and Coping behavior ($r = 0.225$, $p = 0.000$) (Table 6).

DISCUSSION

Perceived stress, physio-psycho-social status and coping behaviors of nursing students: The level of stress perceived by students during clinical practice was moderate stress. The degree of stress of nursing students is lower than that of nursing students in some other countries [7, 12, 13, 16, 26, 27, 28, 29]. This may be due to the following reasons: differences between countries in health, culture as well as education in particular, and nursing education. Stress stemming from the assignments and workload is often ranked third, fourth in other researches [30]; but ranks first in this research, similar to other researches [3, 11, 12, 16, 29]. Nursing students are required to finalize prolonged clinical time and are also expected to finalize many different exercises such as case reports and nursing processes. The stress level of accomplishing these tasks is known to be stressful for nursing students. The stressful events most commonly encountered by students were "experiencing discrepancies between theory and practice". In other studies it is also a main source of stress for students, and is usually ranked at the 4th to 7th levels [16]. But data obtained from this research is limited to a nursing school. Therefore, they cannot be generalized to all nursing schools in Viet Nam and teachers in our university need to discuss and change this part to reduce the stress of students.

The physio-psycho-social status response which occurred during hospital practice was between rare and sometimes. This proves that the nursing students of Duy Tan University who are in clinical practice suffer from stress but do not affect too much to health status. Emotional symptoms were the most regularly symptom. The findings are consistent with previous researches [31]; But it is different than the research of Sheu. et al. social behavioral symptoms were the most common reaction to stress followed by emotional symptoms and physical symptoms. The status response most regularly encountered by students showed that the students feel worried and nervous.

The coping behaviors which nursing student used to decrease stress was between rare and sometimes. The most coping behavior of nursing student during clinical

practice was transference, avoidance behavior was the least regularly used. These results are consistent with the findings of other similar research; transference was the most coping behavior [11, 28, 29, 30, 31,]. In other studies, most students use problem-solving measures to cope with stress [3, 8, 12, 16]. On the other hand, the CBI subscale which got the lowest score was the ''avoidance'' subscale which is consistent with prior researches [3, 11]. In this research, if there are stressors, instead of solving problems, students used other measures to reduce stress, which is transference.

The differences in stress, physio-psycho-social status and coping behaviors among nursing students of different demographic factor: There were statistically significant differences in stress levels, physio-psycho-social status, coping behaviors between interest in Nursing and not interested in Nursing. The findings of the study that if students who are interested in nursing have lower stress perception, their physio-psycho-social status and coping behaviors are better. This result also found in the study of Khater which stated that there were significant differences between student's interest and student's perception of stress [32]. The findings of Shaban which state that students who have an interest in nursing approved avoidance as a coping behaviour more than those who do not have interests[23]. If students are interested in nursing, they will feel motivated to overcome difficulties in clinical practice.

There were statistically significant differences in stress levels and academic year. Sophomore students have lower levels of stress than senior students. In other studies, Labrague showed a statistically significant negative relationship between academic year and overall PSS score [24]. Chan stated higher levels of academic stress in the first year nursing students when compared to senior nursing students [11]. In contrast, the results of Baluwa, Onieva-Zafra indicated that sophomore students had higher levels of stress than freshman students [13]. There were significant differences in physio-psycho-social status and academic year These findings of Labrague which state that physio-psycho-social status doesn't correlate significantly with year level [24].

The relationship between students' stress, physio-psycho-social status and coping behavior: Significant positive correlations between perceived stress and physio-psycho-social status, perceived stress and coping behavior, physio-psycho-social status and coping behavior. These results were inconsistent with Alsaqri, S. H. which state that no statistically significant correlation between levels of stress and coping strategies [14]. In this research, the higher the students received stress levels from different stress sources, the more severe the physical-psycho-social symptoms. In addition, if students have increased stress levels or higher physical symptoms, the more likely the students tended to use various countermeasures to reduce stress. These three factors are closely related to each other if there is a stress problem that occurs when students practice in clinical practice

LIMITATIONS

This study undergoes from a number of limitations that may affect research results. Data obtained from this research is limited to a nursing school. Therefore, they cannot be generalized to all nursing schools. This research used a self-report questionnaire, which may boost the likelihood of resulting discrepancies, because of individual

interpretations of items in the questionnaire. In addition, the attribution of the instructor, the teaching method of an instructor have not been considered, though it may influence the level of cognitive stress. Moreover, this research didn't consider the level of stress associated with the clinical context itself, this could be a factor relevant stress in itself. One limitation of the method of this research is that the cross section supplies stress information at a time, while stress levels can change at a different time, so longitudinal data collection would be an consist methodology to avoid these limitations

CONCLUSIONS

The most common type of stress perceived was stress from assignments and workload. Emotional symptoms were the most common symptoms. The most common coping behavior of nursing student during clinical practice was transference, avoidance behavior was the least regularly used.

Perceived stress, physio-psycho-social status and coping behaviors of nursing students in clinical practice may be affected by aspects academic year, interest in Nursing. Significant positive correlations between perceived stress, physio-psycho-social status and coping behavior. Stress may have an influence on the physio-psycho-social health of the students. Students who get high perceived stress; the physical, emotional, social behaviors symptoms increase. If students avoid the clinical problems to reduce stress levels, the results are the exact opposite; students will experience stress symptoms with higher levels including physical, emotional, social behavioral symptoms. If students stay optimism, this can help students reduce their social-behavioral symptoms. Nursing educators must be aware of these stressors to minimize those factors. Knowing effective countermeasures to reduce stress can then choose the right solutions to enhance students' coping skills to deal with various stressors in the nursing education and training.

Qualitative researches are needed to make better our accepting of the reason of cognitive stress levels of nursing students. Research has only been conducted at Duy Tan University. It is suggested that future research should study this issue in nursing universities in Vietnam to better know the relationship between stress, symptoms and coping behavior Clinical Tests for Student Nurses to get the most general view of the stressful situation of Vietnamese nursing students when they practice clinically.

REFENRENCES

1. Devkota R., S.S. Stress among bachelor level nursing student. Nepal Medical College Journal, 2018. 20(1): p. 33-40.

2. Lim, J., F. Bogossian, and K. Ahern,. Stress and coping in Australian nurses: a systematic review. Int Nurs Rev, 2010. 57(1): p. 22-31. doi: 10.1111/j.1466-7657.2009.00765.x.

3. Shaban, I.A., W.A. Khater, and L.M. Akhu-Zaheya. Undergraduate nursing students' stress sources and coping behaviours during their initial period of clinical training: A Jordanian perspective. Nurse education in practice, 2012. 12(4): p. 204-209. doi: 10.1016/j.nepr.2012.01.005.

4. Stecker, T. Well-being in an academic environment. Med Educ, 2004. 38(5): p. 465-78. doi: 10.1046/j.1365-2929.2004.01812.x.

5. P, B. A comparative, longitudinal study of stress in student nurses in five countries: Albania, Brunei, the Czech Republic, Malta and Wales. Nurse Education Today, 2008. 28: p. 134–45.https://doi.org/10.1016/j.nedt.2007.04.002

6. Dung, V. The stress of second and third year nursing students in Thang Long University in 2015 and some related factors. Proceedings of the scientific 2015, 2015.

7. Asturias, N., et al. The influence of socio-demographic factors on stress and coping strategies among undergraduate nursing students. Nurse Education Today, 2021. 99: p. 104780. doi: 10.1016/j.nedt.2021.104780.

8. Khan, N.A. and S. Parveen. Insights from Clinics: Stress among Nursing Students. Manag Econ Res J, 2020. 6(2): p. 13138. DOI:10.18639/MERJ.2020.9900004.

9. Sharif, F. and S. Masoumi. A qualitative study of nursing student experiences of clinical practice. BMC nursing, 2005. 4(1): p. 1-7.https://doi.org/10.1186/1472-6955-4-6.

10. Sendir, M. and R. Acaroglu. Reliability and validity of Turkish version of clinical stress questionnaire. Nurse Education Today, 2008. 28(6): p. 737-743. doi: 10.1016/j.nedt.2007.11.008.

11. Chan, C.K., W.K. So, and D.Y. Fong. Hong Kong baccalaureate nursing students' stress and their coping strategies in clinical practice. Journal of professional Nursing, 2009. 25(5): p. 307-313. doi: 10.1016/j.profnurs.2009.01.018.

12. Dasgupta, A., et al. Perceived stress and coping behavior among future nurses: A cross-sectional study in West Bengal, India. Indian J Community Med.2020. 45(2): p. 204. doi: 10.4103/ijcm.IJCM_200_19

13. Onieva-Zafra, M.D., et al. Anxiety, perceived stress and coping strategies in nursing students: a cross-sectional, correlational, descriptive study. BMC Medical Education, 2020. 20(1): p. 1-9. doi: 10.1186/s12909-020-02294-z.

14. Alsaqri, S.H. Stressors and Coping Strategies of the Saudi Nursing Students in the Clinical Training: A Cross-Sectional Study. Education Research International, 2017. 2017: p. 1-8. DOI:10.1155/2017/4018470.

15. Hamaideh, S.H., H. Al-Omari, and H. Al-Modallal. Nursing students' perceived stress and coping behaviors in clinical training in Saudi Arabia. Journal of Mental Health, 2017. 26(3): p. 197-203. doi: 10.3109/09638237.2016.1139067.

16. Shdaifat E, J.A., Al-Amer M. Stress and Coping Strategies Among Nursing Students. Global Journal of Health Science, 2018. 10(5): p. 33-41. DOI:10.5539/gjhs.v10n5p33.

17. Phung Nhu Hanh, N.H.V., Le Thi Hai Ha. Stress of students at Tien Giang Medical College in 2018 and some related factors. Journal of health and development studies, 2018. 2(4).

18. Bista B, B.B., Khadka N. Stress and Coping Mechanisms among nursing students in Kathmandu. Journal of Manmohan Memorial Institute of Health Sciences, 2017. 3(1): p. 16-23. https://doi.org/10.3126/jmmihs.v3i1.19175

19. Parveen A, I.S. Evaluation of factors of stress among Nursing Students. Advanced Practices in Nursing, 2017. 2(2): p. 1-4. DOI: 10.4172/2573-0347.1000136.

20. Amanda Biggs, P.B., Suzie Drummond, Lazarus and Folkman's. Psychological Stress and Coping Theory, ed. J.C.Q. Book Editor(s):Cary L. Cooper. 2017.

21. Nerissa Asturias a, b., *, Sharon Andrew c, Gayelene Boardman d, Debra Kerr e. The influence of socio-demographic factors on stress and coping strategies among undergraduate nursing. Nurse Education Today, 2021. doi: 10.1016/j.nedt.2021.104780.

22. LJ, L. Stress, Stressors, and Stress Responses of Student Nurses in a Government Nursing School. Health Science Journal, 2013. 7(4): p. 424-35.

23. Shaban, I.A., W.A. Khater, and L.M. Akhu-Zaheya. Undergraduate nursing students' stress sources and coping behaviours during their initial period of clinical training: A Jordanian perspective. Nurse education in practice, 2012. 12(4): p. 204-209. doi: 10.1016/j.nepr.2012.01.005.

24. Labrague, L.J., et al. Stress and coping strategies among nursing students: an international study. Journal of Mental Health, 2018. 27(5): p. 402-408. doi: 10.1080/09638237.2017.1417552.

25. Sheu, S., H.-S. Lin, and S.-L. Hwang. Perceived stress and physio-psycho-social status of nursing students during their initial period of clinical practice: the effect of coping behaviors. International journal of nursing studies, 2002. 39(2): p. 165-175. doi: 10.1016/s0020-7489(01)00016-5.

26. Baluwa, M.A., et al. Stress and Coping Strategies Among Malawian Undergraduate Nursing Students. Advances in Medical Education Practice, 2021. 12: p. 547. doi: 10.2147/AMEP.S300457.

27. Wu, C.-S., J.-R. Rong, and M.-Z. Huang. Factors associated with perceived stress of clinical practice among associate degree nursing students in Taiwan. BMC nursing, 2021. 20(1): p. 1-12. https://doi.org/10.1186/s12912-021-00602-6

28. Chin, T.Y., C.W. Ching, and Y. Bit-Lian. Coping behaviors in clinical practice among nursing students. The Malaysian Journal of Nursing, 2020. 12(2): p. 5-9. https://doi.org/10.31674/mjn.2020.v12i02.002.

29. Ayed, A., et al. Sources of Nursing Students' Stress and Coping Behaviors during their Clinical Training. International Medical Journal, 2020.

30. Bhurtun, H.D., et al. Changes in stress levels and coping strategies among Finnish nursing students. Nurse Education in Practice, 2021. 50: p. 102958. doi: 10.1016/j.nepr.2020.102958.

31. Sen, S. Perceived Stress and Coping Strategies of Baccalaureate Nursing Students in Clinical Practice. Indian journals, 2018.

32. Khater, W., L. Akhu-Zaheya, and I. Shaban. Sources of stress and coping behaviours in clinical practice among baccalaureate nursing students. International Journal of Humanities Social Science, 2014. 4(6): p. 194-202.