

Factors Contributing to Academic and Clinical Stress of CTU Undergraduate Nursing Students*

Dr. Umereweneza Samuel**

Dr. Lucksana Inklab***

Dr. Supatana Chomson****

Abstract

The purpose of this research study was to investigate the factors that contribute to academic and clinical stress of CTU nursing students in four dimensions of health: physical, social, mental, and spiritual and to identify which dimensions were perceived by nursing students as being particularly stressful more than others. The population of this study consisted of one thousand and fifty-three (1043) junior and senior nursing students from both Thai and Bilingual/international nursing programs. The sample size of two hundred and ninety- eight (298) students was drawn using Taro Yamane Formula. These students participated in this research and provided information through a self-constructed questionnaire.

The results of this research study revealed that generally nursing students experience a high stress from academic and clinical area. In terms of 4 dimensions of health, CTU nursing students experience a higher level of stress in the physical dimension, and a lower level of stress in the social dimension. Generally, junior nursing students experience a high academic and clinical stress more than senior nursing students. Nursing students, who study in the bilingual/international nursing program, experience a higher level of both academic and clinical stress more than those who study in the Thai nursing program. The findings revealed significant relationships between academic/clinical stress ($r=.891$, $p <0.001$); financial problems $r=.891$, $p<0.001$); family problems

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**Lecturer, College of Nursing, Christian University of Thailand

***Assoc. Prof. and Dean, College of Nursing, Christian University of Thailand

****Lecturer and Vice-Dean, Graduate School, Christian University of Thailand

(nursing students whose parents live together, $r=.849$, $p <0.05$; nursing students who parents have separated, $r=.844$, $p<0.05$; and current residence (nursing students who live in CTU dormitories, $r=.853$, $p<0.05$; nursing students who live outside CTU dormitories, $r = .846$, $p <0.05$).

Findings were consistent with previous researches on stress of nursing students, and they call for a review of the nursing curriculum and an introduction of stress management programs that would provide a wholistic care to nursing students.

บทคัดย่อ

งานวิจัยนี้มีวัตถุประสงค์เพื่อศึกษาถึงปัจจัยที่มีผลต่อการเกี่ยดความเครียดในการเรียนรายวิชาทฤษฎีการพยาบาลและรายวิชาปฏิบัติการพยาบาลของนักศึกษาพยาบาล คณะพยาบาลศาสตร์ มหาวิทยาลัยคริสต์เดียน โดยศึกษาใน 4 มิติของสุขภาพ คือ มิติด้านกาย สังคม จิตใจ และจิตวิญญาณ โดยการวิเคราะห์ข้อมูลเพื่อศึกษาระดับความเครียดในแต่ละ มิติสุขภาพประชากรที่ใช้ในการศึกษาครั้งนี้เป็นนักศึกษาพยาบาล ชั้นปีที่ 3 และ ชั้นปีที่ 4 จำนวน 1,043 คน ทั้งหลักสูตรพยาบาลศาสตรบัณฑิต (ภาษาไทย) และ หลักสูตรพยาบาลศาสตรบัณฑิต (นานาชาติ/สองภาษา) กำหนดขนาดกลุ่มตัวอย่างโดยใช้สูตรทราโตร ยามานะ ได้ กลุ่มตัวอย่างจำนวน ส่องรอยเก้าสิบแปดคน (298 คน) เก็บข้อมูลโดยการใช้แบบสอบถามที่ผู้วิจัย สร้างขึ้นเอง

ผลจากการศึกษาพบว่า นักศึกษาพยาบาลมี ความเครียดอยู่ในระดับสูงจากการเรียนรายวิชาทฤษฎี และรายวิชาปฏิบัติ ซึ่งในมิติด้านสุขภาพ 4 ด้าน พบว่า นักศึกษามีความเครียดระดับสูงในมิติด้านกาย และมี ความเครียดระดับต่ำ ในมิติด้านสังคม และนักศึกษาพยาบาล ชั้นปีที่ 3 มีความเครียดจากการเรียน

รายวิชาทฤษฎีและรายวิชาปฏิบัติมากกว่านักศึกษาพยาบาล ชั้นปีที่ 4 และนักศึกษาพยาบาลที่ศึกษาใน หลักสูตรพยาบาลศาสตรบัณฑิต (นานาชาติ/สองภาษา) มีความเครียดในระดับที่สูงกว่านักศึกษาพยาบาลที่ศึกษาในหลักสูตรพยาบาลศาสตรบัณฑิต (ภาษาไทย) ผลการศึกษายังพบความสัมพันธ์อย่างมีนัยสำคัญทางสถิติ ระหว่างความเครียดในการเรียนรายวิชาทฤษฎีและรายวิชาปฏิบัติ ($r = .891$, $p < 0.001$) ระหว่างความเครียดกับปัญหาด้านการเงิน ($r=.891$, $p< 0.001$) และ ระหว่างความเครียดกับปัญหาด้านครอบครัว (บิดามารดา อายุด้วยกัน $r = .849$, $p< 0.05$ และ บิดามารดา แยกกันอยู่ $r = .844$, $p<0.05$) และระหว่าง ความเครียดกับสถานที่พักอาศัยของนักศึกษา (อยู่หอพักในเมืองมหาวิทยาลัย $r = .853$, $p< 0.05$ และอยู่หอพักนอกราชอาณาจักร $r = .846$, $p< 0.05$) ผลการศึกษาในครั้งนี้มีความสอดคล้องกับงานวิจัยที่มี การศึกษาถึงความเครียดของนักศึกษาพยาบาลที่มีมา ก่อนหน้านี้ การทบทวนการจัดการศึกษาหลักสูตรพยาบาลศาสตรบัณฑิต และการบริหารจัดการเรื่อง ความเครียดจะเป็นประโยชน์ในการดูแลนักศึกษาพยาบาลแบบองค์รวมต่อไป

Introduction

Undergraduate nursing students experience a high level of stress as they pursue a higher nursing education seeking knowledge and skills that would help them take care of the patients upon successful completion of their training. As they undergo their nursing education, students experience increased stress from

different corners. Some sources of stress are: (1) classmates, (2) their families, (3) their personality, (4) residence, (5) financial problems, (6) lack of support system, (7) classroom atmosphere, (8) teaching methods, (9) nursing instructors, (10) clinical instructors, (11) assignments, (12) hospital setting, (13) hospital team members especially the physicians, (14) initial experience, (15) lack of confidence, (16) fear of being evaluated, (17) test of different forms, (18) obnoxious patients, (19) death and dying, (20) painful procedures, (21) van drivers, (22) obnoxious instructors, (23) less exposure to life problems, (24) health problem, (25) fear of clinical rotations, (26) days before taking final examination, (27) having case conference presentation and so forth. (Yvone D'Arc, 2010:14-16; Clark, 2008:156; Galperia & Lituchy, 1999:163-169.)

Nursing is one of the most stressful career choices someone can make because the nurse confronts stark suffering, grief and death as few other people do. Many nursing tasks are mundane and unrewarding. Many are, by normal standards, distasteful and disgusting. Others are often degrading; some are simply frightening. Nursing education is very demanding by itself in terms of daily works and homework, paperwork, skill performance, and sometimes, extracurricular activities. As many stressors no matter how big or small are continue to compile on top of one another, they result in

cumulative stress, and if this one is not resolved as soon as possible, it leads to physical and mental exhaustion, to burnout and subsequent to illness. (Brugge, 1986:123; Yvone D'Arc, 2010:14-16.)

Moreover, there is a need for nursing schools/faculty/colleges to identify the stressors they face each day, to identify which ones have great impact on them and address them as early as possible. (Barnes; Davis, 2001:597-605.) It is well known that nursing is a stressful profession whereby oftentimes nurses change their careers once they secure less stressful job opportunities. (Borkowski, Amann, & Weiss, 2007:160-167.)

The major sources of stress experienced are interpersonal relationships and performance demands, (Manktelow, 1995:12-16). It is in this perspective that the researchers embarked in this research work, to determine the factors associated with academic and clinical stress of nursing students, currently enrolled in the third and fourth years of nursing training, and address them as early as possible before they can interfere with their lives. The researchers' assumption is that: "every person has a stress threshold beyond which additional stress would put his/her health in jeopardy". Consequently, measures that would decrease stress level of nursing students would be identified and recommended in order to foster a maximum academic performance and excellence. (Baba, Galperia, & Lituchy, 1999:163-169; Nogueras, 2006:86-95).

Objectives of the study

1. To identify the factors associated with academic and clinical stress of CTU undergraduate nursing students.
2. To determine which undergraduate nursing level experiences a higher level of stress according to the 4 dimensions of health.
3. To determine which one do nursing students experience more stress between academic and clinical stress.

Review of literature

The review of literature and related studies was done to explore other researchers and academicians' views and insights in the field of study.

Stress and stressors

Stress is a natural body response to difficult or challenging situations. All people experience certain amounts of stress during each stage of their development process. Nobody can escape stress, and that is why, stress is known as a life companion. As long as we live, we experience stress. Only a dead person cannot experience stress, (Allender, Spradley, 2005:165-167). Stress producing-producing factors are known as 'stressors'; they may be physiological or psychological or both. These stressors may be pleasant or unpleasant, and they may evoke different emotional or psychological responses while eliciting similar psychological reactions. Stressors

may be actual physical threats or just perceived threats. These may also be the emotional side of joys or sorrows that produce physiologic responses. (Running, Berdt, 2003; Schnits, Newmann, and Opperman; 2000:95-99; Hamilton, 1999:200-201.)

Types of stress

There are different types of stress: acute stress being one of them is the most common. It is a kind of negative stress that is short-lived due to some events that suddenly come, stay for a while, and then go away. Acute episodic stress is a type of stress seen as a way of life. Human life is filled with one stressful event after another. Chronic distress is another type of stress due to events beyond a person's control. For instance living in a war zone, or living with tension in a neighbourhood infested with a gang of murderers, drug users or dealers. Besides, there are other main categories of stress: eustress, hyperstress, hypostress, and distress. Stress is divided into 4 categories which Eustress, Hyperstress, Hypostress, and Distress.

1. Eustress (positive stress/good stress)

Eustress is helpful and somehow a desirable type of stress. Eustress is known as "spice of life". It is a spice of life because it helps us to perform well, and is usually experienced when we are going through happy events like a

graduation, a wedding, the birth of a child, a competitive event, or a vacation, (Larsen, and Buss, 2008:211–213; Feldman, 2008:428–429). www.trizsigma.com/index.html

2. Hyperstress

Hyperstress which is the negative feeling that people tend to have when they are working beyond their limit, for instance this is a type of stress nursing students experience when studying very hard beyond their limits. People suffering from hyperstress are normally not aware of it as they are living in a hectic environment and even have no time to think of their well being or care for themselves. Signs and symptoms of hyperstress include : sudden anger, crying or shouting for no reason, overspending to very small matters, and become a wild person even to your own friends or family members. (Stone, Mooney-Kane, Larson, Pastor, Zwanziger, & Dick, 2007:1085–1104; Schnitz, Newmann, & Opperman, 2007:95–99). www.trizsigma.com/index.html

3. Hypostress (lack of stress)

Hypostress is a type of stress experience by people who are constantly bore. Hypostress is a type of stress that an individual experiences because of lack of self motivation or feeling of boredom. This is common with people who are involved in unchallenging jobs, who always do the same kind of work over and over again. They usually don't have any inspiration and motivation.

These are the people who have little or nothing to worry, and therefore they feel always restless. This type of stress is experienced by some nurses who have been working in one department, doing the same daily routines for years (Larsen & Buss 2008; Feldman , 2008:428–429).

4. Distress (a bad stress)

Distress is a physical and emotional feeling and reaction as a result of many frustrating events in our lives. It is known as a bad stress because if it is left untreated, or unmanaged, this type can lead to very serious mental and physical problems. The signs and symptoms of distress are: muscle tension. Poor appetite and various digestive problems, back pain, headache, decreased immunity, cold extremities, increased heart rate, chest pain, poor sleep, and general weakness (Larsen, and Buss, 2008:23–26; Feldman, 2008:428–429). www.trizsigma.com/index.html

Factors associated with stress in nursing education

There are many factors associated with stress. In this study a few have been mentioned and discussed. These include: age, gender, academic level, study program, marital status, number of siblings and birth order, family problems, geographical origin, current residence, financial problems, lack of social support, religion, and health problems. These factors contribute directly or

indirectly to high stress of people such as nursing students (Charles, 1981:38-50; Timmins & Kaliszer, 2002: 203-211).

Stress in nursing profession and nursing education

Many authors agree that nursing profession is one of the most stressful career choices someone can make. This is because of many problems nurses meet including conflicts with physicians. Everyday, nurses confront stark suffering, grief and death as few other people do. Many nursing tasks are mundane and unrewarding. Many are, by normal standards, distasteful and disgusting. Others are often degrading: some are simply frightening (Nogueras, 2006:86-95; Delcayre, Marotte, Best-Belpomme, Mercadier, Rappaport, 1988:460-468).

Time pressure, quality of care, lack of autonomy and competence, dissatisfaction with pay, health related problems, family problems and coping with patients and their relatives are some reasons why nurses quit nursing profession (Madeline, Beatrice, Clementine, and Hans-Martin, 2010:166-177).

Academic stress

Academic stress is the one experienced by nursing students either in the classroom, library, dormitories, or anywhere on campus or off campus of the university. The clinical stress is the one experienced by nursing students in

the clinical area namely: hospitals, communities, or dormitories located in hospitals or communities. This includes any area outside the university premises, where students go for clinical practice (Hamilton, 1999; Delcayre, Marotte, Best-Belpomme, and Rappaport, 1988:460-468).

Clinical stress

Clinical practice has been identified as one of the most anxiety producing components in nursing programs. Lack of experience, fear of making mistakes, difficult patients, discomfort at being evaluated by faculty members, worrying about giving patients the wrong information or medication and concern about possibly harming a patient are just a few of the stressors for the beginning student nurse, initial experience, clinical instructors and preceptors, Physicians, patients and their relatives, painful procedures, professional roles, case conference, (Hamilton, 1999; Delcayre, Marotte, Best-Belpomme, and Rappaport, 1988:460-468).

Impact of stress on nursing students

In the long run stress becomes chronic and contributes to a variety of illnesses to nursing students. Stress can contribute to mental health of adults such nursing students as a result of problems encountered in childhood and adolescence. Physical, sexual and psychological abuse

and neglect are problems that affect the psychological health people. The effects of childhood abuse are many and varied and may include future prostitution, drug and alcohol abuse, and unprotected sexual activities (Clark, 2008:214; Running & Berdt, 2003:48). Not only stress can lead to various diseases, it can also lead to suicide of nursing students (Warren Rick, 2002:46-48).

Methodology

The descriptive research was used to identify factors contributing to academic and clinical stress of Christian University undergraduate nursing students from the third to the fourth year nursing students enrolled in the academic year 2011-2012. In addition, the comparative research design was used to compare academic and clinical stress of CTU undergraduate nursing students and correlational research methods were used to test relationships between academic and clinical stress.

The population from which the sample size was taken consisted of 1,043 junior and senior nursing students, from both Thai and bilingual/international undergraduate nursing programs. In order to have enough sample size, around 10% of samples were added, and therefore, the sample size is 298. The samples were selected using purposive sampling methods under the following inclusion criteria: -undergraduate CTU

nursing students, -both male and female, -Junior and senior nursing students, and -could willingly make a decision to participate or to stop any time.

A self-constructed questionnaire was developed from the review of literature and related studies. It was submitted to a panel of five experts for content validity. A pilot study was conducted to test the self-constructed questionnaire on August 8, 2011 among 41 undergraduate nursing students, after which it was submitted to reliability and validity testing. The section on academic stress in which all dimensions were combined was found to be reliable at alpha = .9344. The section on clinical stress in which all dimensions were combined was found to be reliable at alpha = .9622.

Regarding ethical concerns, after the research proposal was approved by the president of Christian University of Thailand, the Research Ethics Committee of Christian University of Thailand offered an official written letter allowing the researchers to officially start this research study. The 298 questionnaires were distributed and all of them (100%) were retrieved. Then, all the data were systematically tallied, encoded, tabulated in the computer, and analyzed.

Findings

Part I. Descriptive analysis of the respondents' personal characteristics

Two hundred and ninety-eight (298) undergraduate nursing students

participated in this research study. In terms of age of the respondents, 293 entered their information. The majority, 245(83.6%) were between 21 and 24 years old, 36(12.3%) were between 18–20 years old, and 12 (4.1%) were 25 years old and above. However, 5 respondents did not enter their information. In addition, 298 respondents who participated, 288 (96.6%) were females, and 10(3.4%) were males. Regarding academic level, from 296 respondents, 166 (55.7%) were senior nursing students, and 130(43.6%) were junior nursing students. There were two respondents who did not enter their information. In terms of study program out of 297 respondents, 239(80.5%) were enrolled in Thai nursing program, while 58(19.5%) were enrolled in the bilingual/international nursing program. However, two subjects did not enter their information. Out of 296 respondents, 295(99.7%) were single, and only 1(3.0%) was married. There were two respondents who did not enter their data. Regarding the marital status of parents of the respondents, 226(77.7%) reported that their parents were living together, 36(12.4%) their parents were divorced or separated, 11(3.8%) their parents lived separately because of work or business, and 18(6.2%) entered their data in others. There were 7 subjects who did not enter their data.

As far as the number of siblings is concerned, 210(70.5%) respondents had 1–2 siblings, 76 (25.5%) had 3 or more

siblings, and 10(4.0%) who had no siblings. It was found out that two respondents did not enter their data about number of siblings. With regard to the geographical origin, 13(4.4%) were from Bangkok city, 51(17.1%), from Southern Region of Thailand, 47(15.8%) Northern Region of Thailand, 22(7.4%) Central Region of Thailand, 27(9.1%) Eastern Region of Thailand, 15(5.0%) Western Region of Thailand, and 122(40.9%) other; but one subject did not enter his/her data on geographical origin. From the 297 who entered their data on current residence, 220(73.8%) lived in dormitories, 73(24.5%) lived in CTU dormitories, and 4(1.3%) lived in their own families. There was one subject who did not enter the data regarding current residence.

The findings of this research found out that 226(75.8%) of the 298 respondents enjoyed a family support, while 72(24.2%) had other types of support. In relation to financial problem, out of 295 respondents, 211(71.5%) had no financial problem, and 84(28.5%) had financial problem. There were 3 respondents who did not enter their data on financial problem. On the section of religion, of 295 respondents, the majority 286(96.0%) were Buddhists, 4(1.3%) Muslims, 3(1.0%) Christians, and 2(.7%) others. There were 3 respondents who did not enter their data on religion. Finally, regarding health problems, of 296 respondents who entered their data, 259(87.5%) had no health problems, and

only 37(12.5%) had health problems. There were 2 respondents who did not enter their data on health problem section.

Part 2 Descriptive analysis of the variables in the study

The descriptive analysis of the variables in the study was performed.

1. Academic stress

Table 1 Descriptive statistics of academic stress

Item	Min	Max	Mean	S.D.	Stress Level
Total academic stress in physical dimension score	1	3.40	1.849	.763	Low
Total academic stress in social dimension score	1	2.90	1.442	.411	Low
Total academic stress in mental dimension score	1	3.56	1.770	.535	Low
Total academic stress in spiritual dimension score	1	3.60	1.867	.600	Low

According to table 1, The Perceived of health were low. total academic stress scores in 4 dimensions

2. Clinical stress

Table 2 descriptive statistics of clinical stress

Item	Min	Max	Mean	S.D.	Stress Level
Total clinical stress in physical dimension score	1	3.90	1.83	5.99	Low
Total of clinical stress in social dimension	1	2.70	1.316	.374	Low
Total of clinical stress in mental dimension	1	3.80	1.594	5.01	Low
Total academic stress in spiritual dimension score	1	3.60	1.517	.475	Low

The variables in the study consisted of academic and clinical stress in 4 dimensions of health (physical, social, mental, and spiritual). The results are reflected in the tables below:

According to table 2, the perceived dimensions by CTU nursing students of total clinical stress scores in 4 health were low.

Part 3 Results of data testing the comparison of academic and clinical stress

1. Academic stress

Table 3. Results of comparison of perception of academic stress in physical dimension between junior students and senior students.

Group	n	Mean	S.D.	t	P
Junior students	127	1.9433	.4755	3.029	.0015
Senior students	163	1.7798	.4407		

*Missing Case: 8

The result from Table 3 showed junior nursing students was significantly that the mean perception of academic higher than that of senior nursing stress in physical dimension score of students ($t = 3.029$, $p = .0015$).

Table 4. Results of comparison of perception of academic stress in social dimension between junior students and senior students.

Group	n	Mean	S.D.	t	P
Junior students	123	1.4033	.3673	-1.498	.0675
Senior students	163	1.4748	.4402		

*Missing Case: 12

The result from Table 4 showed dimension scores between junior and no significant difference in the mean senior nursing students ($t = -1.498$, perception of academic stress in social $p = .0675$).

Table 5. Results of comparison of perception of academic stress in mental dimension between junior students and senior students.

Group	n	Mean	S.D.	t	P
Junior students	130	1.814	.5390	1.189	.1175
Senior students	166	1.7404	.5321		

*Missing Case: 2

The result from Table 5 showed dimension scores between junior and no significant difference in the mean senior nursing students ($t = 1.189$, $p = .1175$). perception of academic stress in mental

Table 6. Comparison of perception of academic stress in spiritual dimension between junior and senior nursing students.

Group	n	Mean	S.D.	t	P
Junior students	130	1.9713	.6167	2.634	.0045
Senior students	166	1.7875	.5791		

*Missing Case: 2

The result from Table 6 found that students was significantly higher than that the mean perception of academic stress of senior students ($t = 2.634$, $p = .0045$). in spiritual dimension scores of junior

2. Clinical stress

Table 7. Results of comparison of perception of clinical stress in physical dimension between junior students and senior students.

Group	n	Mean	S.D.	t	P
Junior students	130	1.9979	.6509	3.968	<.0001
Senior students	166	1.7194	.5262		

*Missing Case: 2

The result from Table 7 (above) found that the mean perception of clinical stress in physical dimension score of junior students was significantly higher than that of senior students ($t = 3.968$, $p = <.0001$).

Table 8. Results of comparison of perception of clinical stress in social dimension between junior students and senior students.

Group	n	Mean	S.D.	t	P
Junior students	130	1.2386	.2843	-3.356	<.001
Senior students	166	1.3770	.4233		

*Missing Case: 2

The result from Table 8 showed that there was no significant difference in social dimension scores between junior and senior nursing students in the mean perception of clinical stress ($t = -3.356$, $p = <.001$).

Table 9. Results of comparison of perception of clinical stress in mental dimension between junior students and senior students.

Group	n	Mean	S.D.	t	P
Junior students	130	1.6597	.5041	2.008	.023
Senior students	166	1.5424	.4951		

*Missing Case: 7

The result from Table 8 showed that there was no significant difference in mental dimension scores between junior and senior nursing students ($t = 2.008$, $p = .023$).

Table 10. Results of comparison of perception of clinical stress in spiritual dimension between junior students and senior students.

Group	n	Mean	S.D.	t	P
Junior students	130	1.5327	.4665	.486	.0314
Senior students	166	1.5056	.4839		

*Missing Case: 2

The result from Table 10 found junior students were significantly higher than the mean perception of academic stress in spiritual dimension than that of senior students ($t = .486$, $p = .0314$).

Results of comparison of perception of stress between Thai and bilingual/international nursing students

1. Academic stress

Table 11 Results of comparison of perception of academic stress in physical dimension between Thai and Bilingual/International nursing students

Group	n	Mean	S.D.	t	P
Thai Nursing Students	236	1.8814	.04625	2.625	.0045
Bilingual/Internationals Nursing Students	54	1.7000	.4378		

*Missing Case: 8

The result from Table 11 found Nursing Students was significantly higher than that of Bilingual/International stress in physical dimension score of Thai Nursing Students ($t = 2.625$, $p = .0045$).

Table 12 Results of comparison of perception of academic stress in social dimension between Thai and bilingual/international nursing students

Group	n	Mean	S.D.	t	p
Thai Nursing Students	232	1.400	.3938	-3.361	<.001
Bilingual/Internationals Nursing Students	54	1.6204	.4427		

*Missing Case: 12

The result from Table 12 found that the mean perception of academic stress in social dimension score of bilingual/internationals nursing students was significantly higher than that of Thai nursing students senior students ($t = -3.361$, $p = .0005$).

Table 13 Results of comparison of perception of academic stress in mental dimension between Thai and bilingual/international nursing students

Group	n	Mean	S.D.	t	P
Thai Nursing Students	239	1.7624	.5301	-.309	.3785
Bilingual/Internationals Nursing Students	58	1.7866	.5529		

*Missing Case: 1

The results from Table 13 showed that there was no significant difference in the mean perception of academic stress in mental dimension between Thai and bilingual/international nursing students ($t = - .309$, $p = .3785$).

Table 14 Results of comparison of perception of academic stress in spiritual dimension between Thai and bilingual/international nursing students

Group	n	Mean	S.D.	t	P
Thai Nursing Students	239	1.8697	.6069	.260	.3975
Bilingual/Internationals Nursing Students	58	1.8469	.5764		

*Missing Case: 1

The results from Table 14 showed that there was no significant difference in the mean perception of academic stress in spiritual dimension between Thai nursing students and bilingual/international nursing students ($t = - .309$, $p = .3785$).

2. Clinical stress

Table 15 Comparison of perception of clinical stress in physical dimension between Thai and bilingual/international nursing students

Group	n	Mean	S.D.	t	P
Thai Nursing Students	239	1.8559	.6060	1.152	.125
Bilingual/Internationals Nursing Students	58	1.7550	.5682		

*Missing Case: 1

The result from Table 15 found that there was no significant difference between the mean perception of clinical stress in physical dimension score of

Thai nursing students and of bilingual/international nursing students ($t = .1.152$, $p = .125$).

Table 16 Results of comparison of perception of clinical stress in social dimension between Thai and bilingual/international nursing students

Group	n	Mean	S.D.	t	P
Thai Nursing Students	239	1.2541	.3252	-4.952	<.0001
Bilingual/Internationals Nursing Students	58	1.5670	.4538		

*Missing Case: 1

The result from Table 16 found that the mean perception of clinical stress in social dimension score of bilingual/internationals nursing students

was significantly higher than that of Thai nursing students senior students ($t = -4.952$, $p = <.0001$).

Table 17 Results of comparison of perception of clinical stress in mental dimension between Thai and bilingual/international nursing students

Group	n	Mean	S.D.	t	P
Thai Nursing Students	239	1.5700	.4934	-1.540	.0625
Bilingual/Internationals Nursing Students	58	1.6824	.5197		

*Missing Case: 1

The result from Table 17 found that there was no significant difference in the mean perception of clinical stress in mental dimension score between bilingual/international nursing students and hat of Thai nursing students ($t = -1.540$, $p = .0625$).

Table 18 Results of comparison of perception of clinical stress in spiritual dimension between Thai and Bilingual/International nursing students

Group	n	Mean	S.D.	t	P
Thai Nursing Students	239	1.4912	.4563	-1.796	.037
Bilingual/Internationals Nursing Students	58	1.6155	.5373		

*Missing Case: 1

The results from Table 18 revealed no significant difference in the perception of clinical stress in spiritual dimension between Thai and Bilingual/International nursing students ($t = -1.796$, $p = .037$).

Part IV. Results of data testing the relationships between academic and clinical stress

Table 19 Results of the relationship between academic stress and clinical stress among undergraduate nursing students who have financial problems (n = 84)

Variable	clinical stress	
	r	p
Academic stress	.891	<0.001

Table 19 shows the results of a correlation analysis between perceive academic and clinical stress of undergraduate nursing students who have financial problems. According to the

results, there is a significant positive correlation between perceive academic and clinical stress among undergraduate nursing students who experience financial problems, ($r = .891$, $p < 0.001$).

Table 20 Results of the relationship between academic stress and clinical stress among undergraduate nursing students who do not have financial problems (n = 84)

Variable	clinical stress	
	r	p
Academic stress	.825	<0.001

Table 20 shows the results of a correlation analysis between perceive academic and clinical stress of undergraduate nursing students who do not have financial problems. According to the results, there is a significant positive correlation between perceive academic and clinical stress among undergraduate nursing students who experience financial problems, ($r = .825$, $p < 0.001$).

Results of the relationships between academic and clinical stress of CTU undergraduate nursing students and their respective residence

Table 21 Undergraduate nursing students who live in CTU dormitories (n = 73)

Variable	clinical stress	
	r	P
Academic stress	.853	<0.05

The results from table 21 revealed a high, positive, and significant relationship between perceived academic and clinical stress of CTU undergraduate nursing students, and the current residence ($r = .853$, $p = <0.05$). Once the undergraduate nursing students who live in CTU dormitories experience academic stress, they are more likely to experience also clinical stress.

Table 22 Undergraduate nursing students who live outside (n = 225)

Variable	clinical stress	
	r	P
Academic stress	.846	<001

According to Table 22, there is a significant positive correlation between academic and clinical stress among nursing students who live outside CTU dormitories ($r = .846$, $p = <.001$). This means that nursing students who stay outside CTU dormitories, when they experience

academic stress, they are more likely to experience clinical stress as well. However, the findings of this research reveal that those who stay outside CTU dormitories experience a lower level of stress, than those staying inside CTU dormitories.

Relationship between academic and clinical stress of CTU undergraduate nursing students and the marital status of their parents?

Table 23 Undergraduate nursing students whose parents live together (n = 226)

Variable	Clinical stress	
	r	P
Academic stress	.849	<.001

The results from Table 23 revealed a significant positive correlation between academic and clinical stress among nursing students whose parents live

together ($r = .849$, $p = <.001$). This means that, even if nursing students are coming from functional families, stress can still strike on them as well.

Table 24 Undergraduate nursing students whose parents have separated (n = 72)

Variable	clinical stress	
	r	P
Academic stress	.844	<0.001

The results from Table 24 revealed that the academic stress had a significant relationship with clinical stress ($r = .844$, $p = <0.001$). This means that those nursing students whom parents have separated experience a high level of academic and

clinical stress. Interestingly, those nursing students whose parents don't live together, experience lower level of academic and clinical stress than those parents live together.

Relationship between academic and clinical stress experienced by CTU undergraduate nursing students

Table 25 Academic and Clinical Stress Experienced by Nursing Students

Variable	clinical stress	
	r	P
Academic stress	.846	<0.05

According to Table 25, there is a significant relationship between academic and clinical stress experienced by undergraduate nursing students ($r = .846$, $p = <.05$). This means that once nursing

students experience a high level of stress in one area such as academic, they are more likely to experience in the other as well, such as clinical.

Discussions

The results of this research showed that nursing students experience low level of both academic and clinical stress. These findings are consistent with previous research and literatures that state that stress is a life companion, and therefore, affects everyone including nursing students (Pender, Murdaugh, Parsons, 2006: 281-282).

Stress of nursing students was divided into two main categories: namely academic stress and clinical stress. For each category, stress was described and analysed in four dimensions of health: (1) physical, (2) social, (3) mental, and (4) spiritual. Nursing students perceived the physical dimension to be the highest dimension in which they experience stress, and the social dimension to be the lowest dimension where they experience

stress (Lahey, 2007:508-515; Pender, Murdaugh, Parsons, 2006: 281-282).

The results of this study revealed that, generally, junior nursing students experience a higher level of academic and clinical stress in physical dimension than senior nursing students ($t = 3.029$, $p = .0015$). The findings showed that the mean perception of clinical stress in physical dimension score of junior students was significantly higher than that of senior students ($t = 3.968$, $p = <.001$). These findings are consistent with previous research studies, (Delcayre, Marotte, Best-Belpomme, Mercadier, & Rappaport, 1988:460-468).

The findings showed no significant difference in the mean perception of academic stress in social dimension between junior and senior nursing

students, as well as in the mental dimension ($t = -1.498$, $p = .0675$; $t = 1.89$, $p = .1175$) respectively. Likewise, between junior and senior nursing students, the findings showed no significant difference in the mean perception of clinical stress in social dimension, as well as in the mental dimension ($t = -3.356$, $p = .001$; $t = 2.008$, $p = .023$) respectively.

Another relevant finding about junior nursing students is that they experience a higher level of both academic and clinical stress in spiritual dimension than senior nursing students ($t = 2.634$, $p = .0045$; $t = .486$, $p = .0314$) respectively. This could be because of initial exposure to clinical practice, which makes them not only worried, but also discouraged about their life and their reason of choosing nursing. They are afraid of making mistakes, they are less confident, and they are afraid of being evaluated by staff nurses, preceptors, and clinical instructors (Shapiro, Schwartz, 2000;75:748-59).

The results of this research showed that the mean perception of academic stress, and clinical stress in physical dimension score of Thai nursing students was significantly higher than that of bilingual/international nursing students ($t = 2.625$, $p = .0045$; $t = 1.152$, $p = .125$) respectively. The reason for this could be the high percentage 239 (80.5%) of nursing students who study in Thai nursing program, which outweighs the results.

In social dimension, it was found that the mean perception of academic stress in social dimension score of bilingual/internationals nursing students was significantly higher than that of Thai nursing students senior students ($t = -3.361$, $p = <.001$). The main reason could be the social support from Thai administrators and instructors, and of course the Thai culture in which Thai language plays a great role. The results of this research study found that the mean perception of academic stress in social dimension score of bilingual/international nursing students was significantly higher than that of Thai nursing students senior students ($t = -4.952$, $p = <.0001$).

In terms of perception of academic stress between Thai and Bilingual/International nursing students in mental and spiritual dimensions, the results revealed that there was no significance difference ($t = -309$, $p = .3785$; $t = .260$, $p = .3975$) respectively. Regarding clinical stress in mental and spiritual dimensions, there was no significant difference ($t = -1.540$, $p = .0625$; $t = -1.796$, $p = .037$) respectively.

The findings of this research clearly found that there is a correlation between perceive academic and clinical stress of undergraduate nursing students who have financial problems was positive and in the high level ($r = .891$). It showed that relationship between

perceive academic stress and clinical stress was significant ($p<0.001$). This implies that financial difficulties are among sources of both academic and clinical stress for CTU undergraduate nursing students. These findings are consistent with Abraham Maslow's hierarchy of needs, where he claimed that there are 5 hierarchies of needs that man has to fulfil. These are : biological, safety, love and belongingness, self-esteem, and self-actualization. In the physiologic and security needs, people need to eat, and food is not free. People need money to buy food, and to build houses (Lahey, 2007:379-380), and previous research studies, Baba, Galperin, & Lituchy, 1999:163-169; American Institute of Stress, 2000:45).

The findings of this research revealed that there is a significant correlation between academic and clinical stress as perceived by nursing students who do not have financial problems ($r = .825$, $p = <.001$). Once nursing students experience academic stress, they are more likely to experience also clinical stress.

It was found that there is a significant relationship between academic and clinical stress and a place of residence. More specifically, the findings point out those nursing students who live in CTU dormitories, experience a high level of academic and clinical stress ($r = .853$, $p = <.001$). Nursing students who

stay in CTU dormitories may experience a high level of academic and clinical stress, probably because of strict rules that may affect their free movement, time for studying and sleeping, and relaxation. The other important finding from this research is that there is a significant relationship between academic and clinical stress and the place of residence, this time, concerning students who live outside CTU dormitories. According the findings, even those nursing students who stay outside CTU dormitories, experience a high level of academic and clinical stress. The academic stress had a significant relationship with the clinical stress ($r=.846$, $p=<.001$). According to the finding of this research, there is a high positive correlation between academic and clinical stress and a place of residence. This means that nursing students who stay outside CTU dormitories, experience also a high level of academic and clinical stress. However, the findings of this research reveal that those who stay outside CTU dormitories experience a lower level of stress, than those staying inside CTU dormitories.

Staying in CTU dormitories should decrease the stress level of nursing students since to stay on campus is safe and cheap, but is contrary to the findings of this research. Students who stay outside CTU dormitories experience a lower level of academic and clinical stress, probably because they feel free

to do whatever they want, and they can sleep any time they want. Something very important in these findings is that whether nursing students stay "on campus" in CTU dormitories, or "off campus" outside CTU dormitories, they still experience a high level of academic and clinical stress. The reason is because nursing education, as well as nursing profession is very stressful. Regardless of the place of residence, nursing students have many academic and clinical demands that they each day of their student life. Understanding them and helping them is a "key" for decreasing their stress level (Mahat, 1998:11-19).

Another significant finding in this research study is that there a correlation between academic/clinical stress and nursing students whose parents live together. The clinical stress had a significant relationship with clinical stress ($r=.849, p<.001$). This means nursing students from functional families also experience a high level of academic and clinical stress. This finding shows that coming from a good family, even though, it is something positive, but, it is not a vaccine against stress. Nursing education has its own pressures that it will impose on every student of where he/she comes from (Allender, Spradley, 2005:66; Borkowski, Amann, & Weiss, 2007:160-165).

A very important finding here is that there is a significant relationship between academic and clinical stress and

nursing students whose parents have separated and don't live together anymore. These nursing students also experience a high academic and clinical stress, but what is most interesting, is that they experience a lower level of stress than those nursing students whose parents live together. The findings revealed that the academic stress had a significant relationship with clinical stress ($r=.844, p<.001$). The reason here is that the more humans face problems, the more they develop coping mechanisms and new strategies. By accepting stress as such, the tragedy becomes easier, and the victory becomes evident. In this perspective, nursing administrators and educators, should endlessly support and understand nursing students, since these students have left their families, their friends, and no other support system they have with them (Skillman, Hart & Keeppnews, 2010:77).

The light from this research showed that a relationship exists between academic stress and clinical stress experienced by undergraduate nursing students: the academic stress had a significant relationship with clinical stress ($r=.846, p<.001$). This means that once nursing students experience a high level of stress in one area such as academic, they are more likely to experience stress in the other area as well, such as clinical area. With this respect, nursing administrators and

educators, should constantly monitor nursing students in the academic areas such as classroom, library, dormitories, and also on the clinical area, and assess any manifestation of stress ahead of time, and address it as soon as possible. According to the findings of this research, nursing students who have problems in the academic area, will most probably have also problems in the clinical area. Therefore, the academic training which usually precedes the clinical training should be a good indicator to which nursing student should receive more attention in the clinical area. The academic and clinical areas, are indeed stressors by themselves, and they are full of other stressors that can increase stress of nursing students. Knowing the cause of stress is the first step in understanding it and coping with it.

The sources of stress include life events such as: crime, sexual assault, and violence, natural disasters, terrorism, and daily hassles. Nursing students may not always face strong life events such as loss of loved one, but, they encounter daily hassles from the academic and clinical areas (Lahey, 2007:498).

The findings of this research found out that there is a significant relationship between academic and clinical stress experienced by nursing students who have or don't have financial problems and who live in CTU dormitories or live outside. It was found out that, for

students who have and don't have financial problems, academic stress had a significantly positive relationship with clinical stress ($r = .891$, $p < 0.001$; $r = .825$, $p < 0.001$, respectively). Similarly, for students who live in CTU dormitories and live outside, academic stress had a significantly positive relationship with clinical stress ($r = .853$, $p < 0.001$; $r = .846$, $p < 0.001$, respectively).

The findings showed that, for students who have and don't have financial problems, academic stress had a significantly positive relationship with clinical stress ($r = .891$, $p < 0.001$; $r = .825$, $p < 0.001$, respectively). Similarly, for students who live in CTU dormitories and live outside, academic stress had a significantly positive relationship with clinical stress ($r = .853$, $p < 0.001$; $r = .846$, $p < 0.001$, respectively). Nursing students whether have or don't have financial problems, experience academic stress at low level, and consequently experience clinical stress as well. Nursing students, whether live in CTU dormitories or live outside, experience a low level of academic stress, and consequently experience also clinical stress.

Conclusion and recommendations

The most important findings are that : undergraduate nursing students experience stress from both academic and clinical area. When nursing students

experience stress in one area, they will most probably experience stress also in the clinical area. Junior nursing students experience a higher level of stress, than senior nursing students. Bilingual/international nursing students experience a higher level of stress both academic and clinical stress than nursing students who study in Thai nursing program. Nursing students, whether they come from functional or broken families, from rich or poor families, live inside or outside CTU dormitories..., experience both academic and clinical stress.

1. Recommendations for nursing research

The following recommendations are made for nursing researchers

1.1 Further research studies should cover CTU nursing students from both undergraduate and graduate nursing programs.

1.2 Further research studies focusing on coping strategies and stress management among CTU undergraduate nursing students, should be initiated as soon as possible.

1.3 Replication of this research study to include comparisons with other private nursing colleges/faculties from different universities in Thailand should be done.

1.4 Replication of this research study to include comparisons with other private nursing colleges/faculties from different universities outside Thailand, especially in South-East countries should be conducted.

2. Recommendations for nursing education

The following recommendations are made for nursing administrators and educators

2.1 Nursing administrators and educators should review the nursing curriculum that would be strong academically, yet, caring for nursing students.

2.2 Incorporate the spiritual aspect in the teaching and learning experiences.

2.3 Develop training programs for nursing instructors to train them on how to deliver a strong nursing education, and yet, be more caring to nursing students.

2.4 Establish a counseling department that would provide adequate services to nursing students.

3. Recommendations for nursing practice

In the light of the finding of this research, the following recommendations are made for nursing practice, especially for policy makers

3.1 To develop a system that would monitor every student on individual basis

3.2 Establish seminars for nursing lecturers, preceptors, physicians, van drivers on how to provide services to nursing students without increasing their stress levels.

3.3 Establish a system that would collaborate with the families on nursing students, in order to know more the nursing students, and give them the needed and appropriate assistance.

3.4 Establish a counseling department for nursing students.

3.5 Establish a student work program, where students from poor families can work and have some money or provide scholarships to poor nursing students.

Limitations of this research study

This study is limited only to junior and senior nursing students. Christian University nursing students start to be actively involved in the clinical area when they are in their third year of nursing training. They can therefore be exposed to academic and clinical experiences, and eventually experience academic and clinical stress. Freshmen and sophomore nursing students are only exposed to academic stress; that is why they have been excluded in this research study. This research deals only with undergraduate

nursing students, and not graduate nursing students. This research study takes place at one university and this will affect the generalization to other institutions. Therefore, the results will only be applicable to similar institutions in similar settings. Due to financial constraints, the research study did not explore the coping strategies that CTU nursing students use in coping up with the high stress level. Moreover, it will not explore some interventions in dealing with stressors that CTU nursing students encounter in their university life.

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