

# Depression and Its Associated Factors among Vietnamese Undergraduate Nursing Students

นิพนธ์ต้นฉบับ

Original Article

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## บทคัดย่อ

**วัตถุประสงค์:** เพื่อศึกษาภาวะซึมเศร้า และปัจจัยที่เกี่ยวข้อง ในนักศึกษาพยาบาล ในคณะพยาบาลแห่งหนึ่งในประเทศไทย **วิธีการศึกษา:** นักศึกษาพยาบาลจำนวน 261 คนร่วมการศึกษานี้ ผู้วิจัยขอให้นักศึกษาตอบแบบสอบถามที่ประกอบด้วยข้อมูลทั่วไป แบบวัดความซึมเศร้า CES-D (the Center for Epidemiologic Studies Depression scale) แบบวัดความรู้คุณค่าในตนเอง RSE (the Rosenberg Self-Esteem scale) แบบวัดการสนับสนุนทางสังคม โดยใช้ PRQ-II (the Personal Resource Questionnaire part II) นำเสนอข้อมูลโดยสถิติเชิงพรรณนา ทดสอบความแตกต่างทางสถิติด้วย One-way ANOVA และค่าสหสัมพันธ์ของเพียร์สัน **ผลการศึกษา:** พบว่านักศึกษาร้อยละ 45.6 มีภาวะซึมเศร้า (คะแนน CES-D  $\geq 16$ ) โดยคะแนนเฉลี่ยเป็น 14.98 (SD = 5.08) ความรู้คุณค่าในตนเองและการสนับสนุนทางสังคมสัมพันธ์ทางลบกับความซึมเศร้า ( $r = -0.33, P < 0.01$  and  $r = -0.31, P < 0.01$  ตามลำดับ) ความซึมเศร้าไม่แตกต่างในชั้นปีที่ศึกษาที่ต่างกัน และในผู้ที่มีผลสัมฤทธิ์ทางการเรียนต่างกัน **สรุป:** การศึกษานี้ชี้ให้เห็นความสำคัญของภาวะซึมเศร้าและปัจจัยที่สัมพันธ์กับภาวะซึมเศร้าในนักศึกษาพยาบาลเวียดนาม อัตราภาวะซึมเศร้าที่พบค่อนข้างสูงในกลุ่มนักศึกษาพยาบาลนี้ชี้แนะว่าภาวะซึมเศร้าเป็นปัญหาทางสุขภาพจิตที่สมควรได้รับความใส่ใจจากทุกฝ่ายที่เกี่ยวข้อง

**คำสำคัญ:** ภาวะซึมเศร้า, นักศึกษาพยาบาล, เวียดนาม, ความรู้คุณค่าในตนเอง, การสนับสนุนทางสังคม

## Abstract

**Objective:** To identify depression and its related factors among undergraduate nursing students from one particular nursing institution located in the Northern part of Vietnam. **Method:** Two hundred and sixty-one nursing students participated in this study. The self-administered questionnaires consisted of students' general information, the Center for Epidemiologic Studies Depression scale (CES-D), the Rosenberg Self-Esteem (RSE) scale and the Personal Resource Questionnaire part II (PRQ-II). Descriptive statistics, One-way ANOVA, and Pearson's product moment correlation coefficient were employed to analyze the data. **Results:** It was found that 45.6% of nursing students reported scores indicating depression (CES-D  $\geq 16$ ), average mean score for depression of these participants was 14.98 (SD = 5.08). Self-esteem and social support had negative correlation with depression ( $r = -0.33, P < 0.01$  and  $r = -0.31, P < 0.01$ , respectively). No significant differences were found between depression among the nursing students in different years of study as well as in those with different educational achievement. **Conclusion:** This preliminary study brought about important information regarding depression and its related factors among Vietnamese nursing students. A high depression prevalence among nursing students suggests depression is an important mental health which deserves all parties' concern.

**Keywords:** depression, nursing students, Vietnam, self-esteem, social support

## บทนำ

Adolescent depression is a major concern worldwide with the prevalence of clinical depression up to 28%.<sup>1</sup> It was a significant cause of suicide in the population aged between 15 to 24 years old.<sup>2</sup> Due to its high prevalence, and serious consequences, depression among adolescents deserves more attention.<sup>3</sup> The prevalence of depressive symptoms was reported to be more than 50% among nursing students in some countries such as Thailand, Sweden, Greece, and Iran.<sup>4-7</sup> Various researchers across the countries had pointed out that nursing students are at risk and prone to develop psychological distress, depression in particular.<sup>4,8-10</sup> Most nursing students are females and have age between 18 and

24 years old, thus they are in the transition period between late adolescent and early adulthood,<sup>4-8</sup> and depression often occurs during adolescent and early adulthood periods. Depression is more common among females possibly due to hormone changes.<sup>11</sup> In addition, studying in the nursing program demands nursing students to take high responsibility. Furthermore, they need to interact with various individuals including the patients, the patients' families, and health care members. Nursing students are expected to be highly patient, careful, cautious, and responsible, because their mistakes can seriously harm the patients. Oncology nursing internship pointed out that their most significant

difficulties were dealing with end-stage patients, beginning of the internship, dealing with children who have cancer, and fearing of making a mistake.<sup>12</sup> These situations might cause stress and having a high level of stress for a long period of time might lead to physical and mental changes including depression.

Depression can significantly impact on physical, financial, and interpersonal problems for depressed individuals, and their families.<sup>13</sup> Suicide is one of the serious negative effects caused from depression found in nursing students. Some studies reported that among those students who are depressed, 45% to 75% of them had suicidal idea.<sup>2-14</sup> Nursing students who are found to be depressed tend to have less interest in their studies and lose of interest in responsibilities. Thus, their patients will be less likely to receive the good quality of care from these nursing students. Furthermore, depression may also affect their development in terms of intellectual, mental, emotional, and psychosocial aspects. Previously studies in various countries have also reported that there were significant relationships between self-esteem, social support, and depression among nursing students.<sup>4,10,11,15</sup> Coopersmith (1967)<sup>16</sup> stated that individuals with low self-esteem often felt sad, depressed, and lethargic. Furegato and colleagues (2008)<sup>11</sup> conducted a study with 224 nursing students and found a negative relationship between depression and self-esteem. According to Caplan (1974)<sup>17</sup> social support can aid individuals in various aspects, making them able of adjusting themselves and enabling them to deal with stress or problems effectively to prevent depression. Social support was negative correlated with depression and could explain 3% of the variance of depression in the study conducted with Thai nursing students.<sup>4</sup> Social support was significant negatively correlated with depression ( $r = -.50, p < .01$ ).<sup>8</sup>

In addition, personal factors such as the nursing students' educational levels and educational achievement may also be related to depression.<sup>8,12,18</sup> Educational level (i.e. year of study) reflects certain life events. The first year students may feel depressed due to loneliness, homesickness, and sense of inadequacy due to the transition of their living styles as well as adjust themselves to the study program.<sup>5</sup> These are significant life events which can be leading cause of depression. In the second year of study, nursing students begin to study specific courses on nursing science and to experience nursing practice. In the

third and fourth year of study, nursing students study on nursing professional courses. New stress occurs in the third year of study because of training for professional skills, nursing students have to undertake both theoretical discussion of nursing science and nursing practices. Thus, educational level of different years may lead to different depression scores.

Even though the nursing students in higher years of study can adjust their lives better in terms of living arrangement or studying in the nursing program, they may have high expectations from academic achievement and to have an anxiety for career after they graduate. These pressures may cause of depression. Nursing students who had poor educational achievement are more likely to be stressed. According to Vatanasin (2005),<sup>8</sup> having high level of stress for a long period of time could lead to depression in nursing students. In addition, educational achievement is the indicator of the learning outcomes of students, and it is used to separate students into groups according to their ability. Beck et al (1997)<sup>19</sup> found that grade point average (GPA) was one of the causes of stress and was associated with mental health of nursing students. Thus educational achievement was selected as a possible correlate of depression in this study.

Currently, in Vietnam the studies of depression and its related factors in nursing students have never been conducted. Therefore, this study aimed to determine prevalence of depression and to investigate factors related to depression, including educational level, educational achievement, self-esteem and social support among undergraduate nursing students in one particular nursing institution located in Northern part of Vietnam.

## Method

### Design and study settings

This study is a cross sectional design. It was conducted at a Faculty of Nursing, located in the North of Vietnam.

### Population

Population in this study consisted of all baccalaureate full time nursing students in a selected nursing institution located in the Northern part of Vietnam. These nursing students were studying in the academic year 2010 - 2011. There were 280 students in this nursing institution. Based on exclusion criteria

of having no psychiatric disorders and serious medical illnesses (e.g. heart disease, cancer, etc.), 19 students were excluded due to their mental and medical illnesses as informed by the teachers. Finally, 261 students participated in this study.

## Study Instruments

The following self-report questionnaires were administered to participants:

### Part I: General information

General information encompassed of participants' age, gender, their years of study, grade point average (GPA), their home town location, persons whom they live with. All of these questions were developed by the researcher. The classification of educational achievement [GPA] was based on the standard justification of this nursing institution. The grades ranged from 1 to 10, of which higher scores indicated better academic achievement.

### Part II: Self-Esteem

Self-esteem among undergraduate nursing students was measured by the use of Rosenberg Self-Esteem Scale.<sup>20</sup> This scale has been widely used to assess self-esteem among adolescents as well as nursing students. This scale focuses on self-evaluation, self-love, self-pride, self-acceptance, self-confidence, and self-efficacy. It includes 10 items rated on a four-point Likert scale, ranging from 1-strongly disagree to 4-strongly agree. The total score ranged from 10 to 40. Rosenberg (1965)<sup>20</sup> recommended interpretation of the ranged score as follows: 10 – 20, 21 – 30, and 31 – 40 points as low, moderate and high level of self-esteem, respectively. In the present study, the Self-Esteem Scale was pilot tested for its reliability with 40 nursing students. The Cronbach's alpha of this questionnaire was 0.78.

### Part III: Social Support

Social support among undergraduate nursing students was measured by using the Personal Resource Questionnaire (PRQ). This questionnaire was developed by Brandt and Weinert.<sup>21</sup> The original PRQ was modified twice and the latest version is called "PRQ 85". For this study, only the second part of PRQ 85 was used to measure nursing students' perceived level of social support. This questionnaire was composed of 25 items on a seven-point Likert scale. Scores

ranged from 1-strongly disagree to 7-strongly agree. This social support scale consisted of five dimensions including intimacy, social integration, nurturance, worth, and assistance. The total score ranged from 25 to 175 scores which higher score represents better social support.<sup>21</sup> The levels of social support were classified as follows: 25 – 116, 117 – 149 and 150 – 175 for low, moderate and high level of social support respectively. This questionnaire was pilot tested for its reliability with 40 nursing students, and a Cronbach's alpha of this questionnaire of 0.79 was found.

### Part IV: Depression

Depression among these nursing students was measured by using the Center for Epidemiologic Studies Depression Scale (CES-D), developed by Radloff (1977).<sup>22</sup> This depression scale was designed to assess the major symptoms of depression identified in the literature, but not clinical depression. It consisted of 20 items encompassing six components: a) depressed mood, b) feelings of guilt and worthlessness, c) feelings of helplessness and hopelessness, d) psychomotor retardation, e) loss of appetite, f) sleeping disorders. This scale has been widely used in various countries, including Vietnam. It is applicable across ages and general groups of population. The items have four-point Likert scale whose scores range from 0 to 3. The total score range from 0 to 60. The cutting point of 16 is indicated as having depression.<sup>22</sup> This scale has already been used in Vietnam to survey depression with medical students. Its Cronbach's alpha was 0.78.<sup>23</sup> In the present study, the Cronbach's alpha coefficient obtained from the pilot study with 40 students was 0.79. All questionnaires mentioned above were administered to 261 students via self-report. It took about 30 minutes to complete these questionnaires.

## Ethical considerations

The study protocol was granted for ethical approval from the Faculty of Nursing Burapha University Institutional Review Board (IRB Reference No. 07-11-2010, Dec. 13, 2010). Data collection was begun after getting permission from the study nursing institution.

## Data analyses

A statistical software program was used to analyze data. The alpha level for significance was set at 0.05. Descriptive

statistics including frequency, percentage, range, mean, and standard deviation were employed to describe demographic information, self-esteem, social support, and depression. The One-way Analysis of Variance (ANOVA) was used to test whether nursing students with different years of study had different depression scores. Pearson's Product Moment Correlation Coefficient was employed to examine the relationship between selected factors including students' educational achievement, self-esteem, and social support with depression. Prior to data analyses, assumptions testing for normal distribution and linearity were examined.

## Results

### Demographic characteristics of nursing students

The participants in this study were 261 undergraduate nursing students who met the inclusion criteria (Table 1). Most of them were female (75.9%). Average age of these nursing students was 20.4 years (SD =1.51). Their ages ranged from 18 to 26 years old; the majority of them (54%) were from 18 to 20 years old. The grade point average (GPA) of all semesters of the students was 7.29 (SD = 0.68). These grades were classified into four different levels including low (1.9%), moderate (43.7%), good (47.9%) and very good (5.5%) level.

**Table 1** Demographic characteristics of nursing students (N = 261).

Characteristics	Number	%
<b>Age</b> (years) (mean = 20.40; SD = 1.51)	261	100
<b>Gender</b>		
Male	63	24.1
Female	198	75.9
<b>Year of study</b>		
First year	97	37.1
Second year	62	23.8
Third year	46	17.6
Fourth year	56	21.5
<b>Academic achievement by grade point average (GPA)</b> (mean = 7.29; SD = 0.68)		
Low or level 1 (GPA = 0 - 5.4)	5	1.9
Moderate or level 2 (GPA = 5.5 - 6.9)	115	43.7
Good or level 3 (GPA = 7 - 8.4)	125	47.9
Very good or level 4 (GPA = 8.5 - 10)	16	5.5
<b>Living status</b>		
With Parent	26	10.0
With Relative	23	8.8
With Friends	128	49.0
Alone	84	32.2

The majority of these students live with their friends (49%) only 32.2% of them live alone, while others live with their parents or relatives, 10% and 8.8%, respectively.

### Depression among undergraduate nursing students

Average depression scores among these nursing students was 14.98 (SD = 5.08) (Table 2). There were 119 students, which accounted for 45.6% of total participants, who had depression as indicated by having CES-D scores equal to 16 or above.

**Table 2** Depression based on CES-D among nursing students (N = 261).

	Number	%
Total depression score (mean = 14.98; SD = 5.08)		
Not depressed (CES-D <16)	142	54.4
Depressed (CES-D ≥ 16)	119	45.6

### Self-esteem and social support among nursing students

Table 3 shows that the average scores of self-esteem was 27.55 (SD = 4.12). It showed that 23% of students reported high level of self-esteem, 72.4% had moderate level of self-esteem and 4.6% had low level one. The average score for social support was 128.99 (SD = 13.99). The majority of students (71.6%) had a moderate level of social support, whereas social support in another 21.5% of them was low. Notably, there were only 18 students (6.9%) who had a high level of social support.

**Table 3** Self-esteem and social support among nursing students (N = 261).

	Number	%
<b>Self-Esteem</b> (mean = 27.55; SD = 4.12)		
Low level (Scores: 10 - 20)	12	4.6
Moderate level (Scores: 21 - 30)	189	72.4
High level (Scores:31- 40)	60	23.0
<b>Social Support</b> (mean =128.99; SD = 13.99)		
Low level (Scores: 25 - 116)	56	21.5
Moderate level (Scores: 117 - 149)	187	71.6
High level (Scores: 150 - 175)	18	6.9

## Relationships between selected factors and depression among undergraduate nursing students

In investigating differences existing among years of study and depression scores, findings revealed that there was no relationship between year of study and depression score ( $F = 1.91$ ,  $P$ -value  $> 0.05$ ).

For the relationships between self-esteem, social support as well as educational achievement and depression, Pearson correlation coefficient was employed for these investigations. The results revealed negative relationships between self-esteem and depression ( $r = -0.33$ ,  $P$ -value  $< 0.01$ ) as well as social support and depression ( $r = -0.31$ ,  $P$ -value  $< 0.01$ ). However, there is no significant relationship between educational achievement and depression ( $r = -0.06$ ,  $P$ -value  $> 0.05$ ) (Table 4).

**Table 4** Correlation coefficients of depression score (CES-D) with other measures (N = 120).

Psychological measures	Pearson correlation coefficient with CES-D score
Educational achievement	-0.06
Self-Esteem	-0.33*
Social support	-0.31*

\*  $P < 0.01$

## Discussions and Conclusion

From these study findings, there were 45.6% of the total nursing students who were found to be depressed by the cut-off point of CES-D scores at  $\geq 16$ . The number of depressed students was close to the previous study which used CES-D scale to screen for depression and used the same cutting point to classify whether students had depression or not. For example, Ross and colleagues (2005)<sup>4</sup> found that 50.1% of the Thai nursing students studying in the institutions located in the Eastern region of Thailand had depression. The results demonstrated that there were depressive symptoms among these nursing students in Southeast Asian countries which are significantly alarming.

For the investigation of depression among nursing students by using Beck Depression Scale, the percentage of depressed nursing students from the studies conducted in Greece and in Iran were 52.4 %, and 60%, respectively.<sup>6-7</sup> In Vatanasin's study using the Thai Depression Inventory to

examine depression among Thai nursing students in the year 2005, the results revealed that 16.2% of nursing students had depression.<sup>8</sup> Specifically, depressive symptoms are frequent among university students around the world.<sup>24-27</sup> The different percentages of nursing students suffered from depression may relate to the use of different tools to capture depression, or different sample size, motivation of subjects to response, as well as nature of the nursing curriculum used in each nursing institution.<sup>8</sup> However, the results from this study revealed the high prevalence of depression among nursing students when the cut-off point of CES-D  $\geq 16$  was used to indicate depression. The possible explanation for the high prevalence of depression among these undergraduate nursing in this study were that, being nursing students, they had to adjust themselves to age-appropriate development and to their studies in the nursing program. In addition, these nursing students were in the transition period of the late adolescent to the early adulthood which is a critical period for individuals to search for their own identity. The students still have emotional and mental changes. These can easily lead to confusion and may also link to becoming depressed.<sup>8</sup> According to Hankin and colleagues (1998),<sup>28</sup> the adolescent period may represent a critical time in the early life course when risk for depression is at its greatest, especially for females. However, caution should be taken not to generalize the findings regarding the high prevalence of depression. The question remains as to whether the appropriate cutting point for depression among Vietnamese students, nurses in particular, should be raised. Hence, more research is needed to be conducted in order to draw conclusions.

## Relationships between select factors and depression

### Relationships between personal factors and depression

Regarding years of study, the findings from this study revealed that nursing students studying in different years of the program did not differ significantly in depression scores. This was consistent with study conducted in Greece which found no significant differences of depression score among nursing students with different years of study.<sup>6</sup> However, the results from this study were in contrast with the results from some previous studies.<sup>8-12</sup> Those studies found that nursing students with different years of study had different depression scores. The possible explanations for the findings from this

study which revealed no significant difference of depression among nursing students with different years of study can be discussed as follows. Vatanasin (2005)<sup>8</sup> mentioned that the higher years of study, the higher maturity students gain. By this statement, the fourth year students who are older, are assumed to have more experiences and should be able to face various problems and should have lower rate of depression. Contrary to this notion, it might be possible that no matter which years students study, there are multiple sources of stressors across life span. The first year students may feel depressed as related to the transition of their living styles from leaving their parents to live independently as well as adjusting themselves to the study program. However, the senior nursing students may also have depression. Even though, the nursing students in higher years of study can adjust their lives better in terms of living arrangement or studying in the nursing program, they may also confront with other factors related to psychological distress such as having boyfriends or girlfriends or poor relationships with peers or teachers. These may also contribute to depression among students in higher years of the study. Xiaojia and colleagues (1994)<sup>29</sup> found girls experienced a greater number of depressive symptoms after age 13 as compared with boys. Changes in uncontrollable events are associated with the increases in girls' but not boys' depressive symptoms.

For educational achievement, the finding from this study indicated that nursing students' educational achievement was not significantly related to depression ( $r = -0.06$ ,  $P$ -value  $> 0.05$ ). The result of this study was in contrast with the study of Vatanasin which showed a significant negative relationship between educational achievement and depression among undergraduate nursing students.<sup>8</sup> Nursing students who had higher educational achievement tended to have lower depression score, whereas those with a low academic achievement tended to have a more severe depression. These points are debatable. Having low academic achievement may make students develop a negative attitude and behaviors such as sadness, suicide, and also lead to depression.<sup>30</sup> According to Morgan,<sup>31</sup> adolescents who have low level of educational achievement may have a sense of inferiority and this might contribute to depression. However, this study did not support this notion. It might be possible that those students with high academic achievement may also be more prone to develop depression. The findings in the present study indicate no significant relationship between educational

achievement and psychological distress as indicated by depression among undergraduate nursing students.

In general, students with better academic achievement seem to have less depression. These students may feel self-worth and proud of themselves. However, it might be possible that those students with better academic achievement are more likely to pose themselves for higher expectation regarding academic success than those students who have lower academic achievement. According to Johnson and colleagues,<sup>32</sup> in terms of goal setting, students at high risk for mental problems endorse higher expectations for occupational and academic success than those students at low risks. The students may focus their lives on achieving academic success. At the same time, they might miss some activities such as leisure times or exercise, etc. However, for Vietnamese culture in general, the expectancies to have academic achievement are emphasized more for men rather than for women.<sup>33</sup> Men seem to have high expectation from society to be a leader or get better careers and these force them to place more concern toward their academic achievement in comparison with women. Nevertheless, it may be premature to draw a conclusion that the relationship between academic success and depression does not exist. There might be some other factors which were not examined in this study but they may be responsible for the inconsistency of the findings. In addition, the GPAs of these Vietnamese nursing students were quite good. Their achievements are in the moderate levels, with low variation in gender and academic achievement. This may lead to the findings that there were no relationships between academic achievement and depression.

#### ***Relationships between self-esteem, social support, and depression***

The results of this study showed that self-esteem was negatively correlated with depression among undergraduate nursing students ( $r = -0.33$ ,  $P$ -value  $< 0.01$ ). Simply stated, undergraduate nursing students who had a lower level of self-esteem had a higher level of depression. These findings corresponded well with various studies conducted in Asia and in Europe.<sup>4-8,10,11,15</sup> It should be noted that the majority of participants in this study were women. As for the studies conducted with Thai baccalaureate nursing students, Vatanasin (2005)<sup>8</sup> found that self-esteem was negatively correlated with depression scores ( $r = -0.61$ ,  $P$ -value  $< 0.01$ ). Consistent with the study conducted by Ross et al. (2005),<sup>4</sup>

self-esteem was negatively correlated with depression among nursing students and could explain 7.9% of the variance in depression. Furegato and colleagues (2008)<sup>11</sup> conducted their study in Brazil and also found negative relationship between self-esteem and depression. Furthermore, Talaei and co-workers (2009)<sup>25</sup> discovered a significant relationship between self-esteem and depression among Iranian university students. The results from previous studies as well as this study affirmed the negative relationship between self-esteem and depression among nursing students. Results from this study support the premise toward the human need for self-esteem as a basic aspect of feeling well, and a great desire to view the self positively is essential for human beings.<sup>34,35</sup> Low self-esteem is one of the factors related to depression as low self-esteem leads to the feeling of low self-confidence and emotional instability.<sup>16</sup> It usually found that depressive individuals think in a negative manner and have lower self-esteem than non-depressed people.<sup>4</sup> Depression and self-esteem tend to be highly correlated with each other,<sup>36-37</sup> and low self-esteem has also been associated with suicidal attempts especially in adolescents.<sup>38</sup>

The finding of this study indicated that social support was negatively related to depression among nursing students ( $r = -0.31$ ,  $P$ -value  $< 0.01$ ). This result indicated that undergraduate nursing students who had a lower level of social support tended to have higher level of depression. Its results also corresponded with previous studies conducted with nursing students across the countries.<sup>4-8,39,40</sup> According to Vatanasin,<sup>8</sup> social support was negatively correlated with depression among Thai nursing students ( $r = -0.50$ ,  $P$ -value  $< 0.01$ ). Talaei and colleagues (2009)<sup>25</sup> also discovered the significant relationship between social support and depression among Iranian university students. In addition, Kim (2001)<sup>41</sup> reported that low level of social support is an important risk factor contributing to depression. As explained by social theories, social support is usually regarded as supporting factors which prevent people from stress and depression. It is an important factor that help promote individual's adaptation.<sup>17</sup> People who have higher social support, may also have lower depression and less suicidal ideation.<sup>42</sup> Furthermore, it has also been found that nursing students who have sufficient social support can avoid or reduce depression.<sup>40</sup> The present study showed that majority of the subjects (71.60%) had a moderate level of social support. When undergraduate nursing students have support to their needs, they are more likely to deal with stress

in life appropriately. According to Caplan (1974)<sup>17</sup> social support facilitates individuals in various aspects and enables them to adjust themselves better. A high supportive network help promote mental health by reducing anxiety, stress and depression.<sup>43</sup> In addition, the findings also pointed out that social support had a significant negative relation with depression scores. Thus, findings from this study demonstrated that social support is an important factor that should be taken into consideration.

### Study Implications

The study findings revealed that 45.6% of undergraduate nursing students at a Vietnamese nursing institution had depression. The findings indicated that depression among nursing students is an important mental health concern that nursing educators, administrators, and nursing institutes as well as health professions should be aware of. In fact, depression can be treated. An interesting question is whether these nursing students have sufficient knowledge about depression and its treatment, and whether they know how to seek help. Nursing instructors, health professional, and mental health nurses should provide programs in promotion of education and prevention of depression for undergraduate nursing students to improve knowledge and awareness toward depression.

Self-esteem was found to be negatively related to depression among undergraduate nursing students. The level of self-esteem of nursing students should be assessed in order to screen whether these students are at risk to develop depression. Self-esteem should be strengthened through program which helps increase the perception of self-pride among nursing students. In addition, to prevent depression in nursing students, their self-esteem should be promoted. Assessments of the causes related low self-esteem should be carried out for individual students and the information obtained should be analyzed in planning to help enhance their self-esteem.

Social support was found to be negatively related to depression among undergraduate nursing students. Level of social support should also be assessed in order to screen for risk of depression. Therefore, to assess the cause of lack of social support in undergraduate nursing students, nurse educators or health care providers should collect information on their students and make plans for promoting social support among them.

In this study no significant relationship between years of study as well as academic achievement were supported. However, it should be noted that these was less variation in academic achievement that may affect the results. These results also raise the concern whether there are other sources of stress students may confront that make them become depressed. In addition, this study only assessed depression, there are some other mental health aspects that should be assessed such as anxiety which is usually co-morbid with depression. Nursing instructors or those who involve in caring and supervising these students should try to understand the learning conditions, as well as stressful life events that students may confront as well as students' adjustment, and adaptation during their study in different years of the program.

### Study limitations

This study contributes important information related to depression and its related factors. Nevertheless, there are some limitations. Firstly, this study was drawn from a population of nursing students in only one nursing institution in Northern part of Vietnam. Secondly, depression was assessed via only the use of one self-administered questionnaire. In addition, this study was a cross-sectional study which is unable to investigate causal relationships and change in depression over time.

### Recommendations for future study

This study was conducted in only one institution. To strengthen the generalized abilities, further investigation should be conducted with undergraduate nursing students in other parts of Vietnam. Qualitative research as well as longitudinal studies should be incorporated in order to obtain more insightful information regarding depression and its related factors. This study was a preliminary study to explore prevalence of depression and tested its relationships with related factors. It should be replicated to examine depression and its related factors in a higher level. In future research, an experimental study should be conducted in order to prevent, and reduce depression among undergraduate nursing students who are at risk to develop psychological distress, depression in particular.

This preliminary study conducted with Vietnamese nursing students brought about the important information regarding prevalence of depression and factors related to depression. A

high rate of depression was found in this study. These highlight the fact that depression among nursing students is an important mental health concern that nursing educators should be aware of and find ways to minimize the risks including developing and delivering of therapeutic intervention, as well as monitoring and follow-up continuously with nursing students, especially those who were found to be depressed. The results also emphasize the important roles of self-esteem and social support. Thus, the management of teaching and learning as well as programs aiming at enhancing self-esteem and social support should also be prioritized.

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Editorial note

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