

ความกังวลใจและอาการซึมเศร้าของนักศึกษาพยาบาลไทย : การศึกษาวิจัยเชิงผสมผสานแบบเชื่อมโยงภายใน

Worries and Depressive Symptoms among Baccalaureate Nursing Students in Thailand: An embedded Mixed Methods Study

บทความวิจัย

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บทคัดย่อ

การวิจัยนี้เป็นการศึกษาเชิงผสมผสานแบบเชื่อมโยงภายในด้วยการตรวจสอบและอธิบายความกังวลใจและความ
เกี่ยวข้องกับอาการซึมเศร้าของนักศึกษาพยาบาลระดับปริญญาตรีในประเทศไทย โดยได้เก็บข้อมูลเชิงคุณภาพและเชิงปริมาณไป
พร้อมกันในเดือนกรกฎาคม 2550 ข้อมูลเชิงปริมาณได้นำมาใช้ในการตรวจสอบความเกี่ยวพันระหว่างความกังวลใจและอาการ
ซึมเศร้า ส่วนข้อมูลเชิงคุณภาพได้ใช้ในการอธิบายเชิงลึกในเรื่องความเกี่ยวพันของสองแนวคิดข้างต้น

นักศึกษาพยาบาล ชั้นปีที่ 3 และ 4 จำนวน 112 คน เป็นกลุ่มตัวอย่างที่นำมาจากกลุ่มตัวอย่างของการวิจัยใหญ่ในเรื่อง
อาการซึมเศร้าและการทำนายกลุ่มนักศึกษาพยาบาลจาก 4 ประเทศ (ญี่ปุ่น ไต้หวัน ประเทศไทย และสหรัฐอเมริกา) ในจำนวน
นักศึกษา 112 คน จำนวน 86 คน รายงานถึงความกังวลใจอย่างน้อย 1 เรื่อง จากจำนวนรายงานทั้งหมด 282 เรื่อง จากความกังวลใจ
ใน 6 ประเด็น ได้มาจากการบรรยายของกลุ่มตัวอย่าง ประเด็นทั้ง 6 นี้ ประกอบด้วย การจัดการด้านการศึกษาและเวลา สุขภาพ
ความสัมพันธ์ระหว่างบุคคล เศรษฐกิจ การสอบขึ้นทะเบียนประกอบวิชาชีพการพยาบาลและการผดุงครรภ์ และความห่วงใยใน
ความเป็นวิชาชีพ การวิเคราะห์การถดถอยแบบมีขั้นตอนแสดงได้ว่า ความกังวลใจมีความสัมพันธ์ทางบวกกับอาการซึมเศร้า
($\beta = .377$) และมีอำนาจการทำนายอาการซึมเศร้าได้ 13.6%

ผลการวิจัยข้างต้นได้รับการยืนยันด้วยข้อมูลเชิงคุณภาพ จากกรณีตัวอย่าง ใช้การวิเคราะห์เนื้อหาเพื่อศึกษากลยุทธ์การ
เผชิญปัญหาที่ช่วยให้นักศึกษาบางคนจัดการกับชีวิตตนเองทางบวกได้ นักศึกษาพยาบาลบางส่วนได้บรรยายถึงทรัพยากรสนับสนุน
(แรงสนับสนุนทางอารมณ์จากครอบครัวและเพื่อน) กลยุทธ์เชิงการปฏิบัติ และกลยุทธ์ในการเผชิญอย่างแข็งขันที่ตนเองใช้แล้วรู้สึก
ว่าดี และ/หรือ ช่วยในการเผชิญปัญหาความกังวลใจ ได้อภิปรายถึงการนำผลการวิจัยไปใช้ในบทความด้วย

คำสำคัญ : ความกังวลใจ, อาการซึมเศร้า, นักศึกษาพยาบาลระดับปริญญาตรี

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Abstract

This embedded mixed methods study examined and described worries and their association with depressive symptoms among baccalaureate nursing students in Thailand. Both quantitative and qualitative data were collected simultaneously in July 2007. While quantitative data were used to examine the associations between worries and depressive symptoms, qualitative data were used to describe in-depth the associations between these two concepts.

One hundred and twelve junior and senior nursing students were drawn from a larger study of depressive symptoms and their predictors among nursing students in four countries (Japan, Taiwan, Thailand, and the USA). Out of 112 students, 86 reported at least one worry, with a total of 282 worries reported. Six fields of life worries were generated from participants' narratives. These fields include school and time management, health, interpersonal relationships, economic concerns, national board examination, and professional concerns. Hierarchical regression showed that worries were positively associated with depressive symptoms ($\beta = .377$) and accounted for 13.6% of the explained variance in depressive symptoms. To cross-validate the quantitative findings of a significant positive relationship between worries and depressive symptoms in this study, a case exemplar is presented to provide in-depth information about the phenomenon. Content analysis was performed to examine coping strategies, or what had helped some students to have a positive outlook towards life. Several students described available resources (especially emotional support from family and friends), practical strategies, and active coping strategies they had used to help them feel good and/or to cope with their worries. Nursing implications are discussed.

Keywords: Worries, Depressive symptoms, Baccalaureate Nursing Students

Literature Review

Evidence shows that worries have been associated with poor mental health. However, little is known about the association between worries and depressive symptoms among nursing students. Therefore, this embedded mixed methods study examined and described worries and their relationships with depressive symptoms among baccalaureate nursing students in Thailand.

A worry was previously identified as a sub-concept of anxiety or used interchangeably with anxiety (Spielberger et al., 1980; Wisocki et al., 1986). However, Zebb and Beck (1998) found a distinction between these two constructs in their research. While "anxiety generally has been conceptualized as a global, all-encompassing construct, with definitions including somatic sensations (e.g., palpitations,

dyspnea), cognitive elements (e.g., fear, apprehension), and/or behavioral components (e.g., avoidance, escape)" (Zebb & Beck, 1998), worry refers to "...cognitions that a state of an object [self, in-groups, society, and world] in one or more domains of life [health, relationships, etc.] will become or remain discrepant from its desired state" (Boehnke et al., 1998, p. 778).

Worries include micro and macro worries. Micro worries are pertaining to self and loved ones and have been found to be associated with psychological distress such as anxiety, emotional disorders, and depression (Boehnke et al., 1998). Macro worries, on the other hand, pertain to society and the world and have not been linked to such distress. In fact, sometimes they have even been linked to positive mental health (Boehnke et al.).

Also, worries can be classified based on their domain and objects (Boehnke et al., 1998). The domain of worries refers to negative cognitions about the field of life such as health, safety, environment, social relationships, meaning, achievement, or economic concerns (Boehnke et al., 1998). The domain of worries is not as important as the object of worries, based on Boehnke and co-workers. The term “worries” has been used interchangeably with “concerns” (Brosschot, Gerin, & Thayer, 2006). Yet, although these two terms may seem similar, they are different in meaning. Worries are negative mental activities that can lead to circular thoughts, a sense of no control, and destructive behavior, while concerns are short-lived, promote constructive approaches in addressing problems, and lead to healthy behavior (Standbek, 2006). Thus, many studies that proposed to examine “concerns,” or “stressors” in nursing students may have, in fact examined “worries.”

Worries of nursing students from various countries have been reported in terms of areas of life, such as high course demands, lack of free time, fear of academic failure, negative relationships in clinical settings, a perceived lack of clinical skills, financial difficulty, role conflicts, and career direction (Burnard et al., 2008; Callister, Khalaf, & Keller, 2000; Gibbons, Dempster, & Moutray, 2009; Howard, 2000; Kipping, 2000; Kleehammer et al., 1990; Lo, 2002; Mahat, 1996, 1998; Pryjmachuk & Richards, 2007; Timmins & Kaliszer, 2002; Wilson-Barnett et al. 1995). These studies, however, have examined worries without studying their associations with depressive symptoms.

Worries, constant troubling concerns about something or someone can lead to stress which is associated with depressive symptoms (Ross et al., 2005). Depressive symptoms are in turn related to poor quality of life, ranging from low levels of productivity to suicidal attempts (US Department of

Health and Human Services, 2000). A study of nursing students in Thailand showed that none of the demographic variables were found to be associated with depressive symptoms (Ross et al., 2005). However, age, gender, income, and levels in the program of nursing students have been linked to stress in other countries (Beck & Srivastava; Jennings, 2001; Tully, 2004). Therefore, these demographics were included as controlled variables in the present study. Students who are older and at a higher level in the program have reported less stress than younger students at a lower level (Beck & Srivastava). Male nursing students reported more role strain in clinical settings than female students (Tully, 2004). Students with financial difficulties are more likely to feel stressed (Jennings, 2001; Ya-Ling et al., 2009).

Little is known about the worries of nursing students and their relationship with depressive symptoms. Therefore, this study examined and described worries and their association with depressive symptoms among baccalaureate nursing students in Thailand.

Methods

Design

To confirm and cross-validate findings, an embedded mixed methods design was used in this study (Creswell, 2007; Creswell & Tashakkori, 2007). Both quantitative and qualitative data were collected simultaneously in July, 2007. While quantitative data were used to examine the associations between worries and depressive symptoms, qualitative data were used to expand our understanding in-depth about the associations between these two concepts.

Sampling and Setting

One hundred and twelve junior and senior nursing students were drawn from a larger study of the predictors of depressive symptoms among nursing

students in four countries (Japan, Taiwan, Thailand, and the USA). All of the 112 participants were single. The participants ranged in age from 20 to 39, with a mean age of 21.8 years old (SD = 2.90). The majority of participants were female (94.3%). A little more than half (56%) were junior students. Forty-three percent lived with their parents. The median monthly family income was 20,000 Baht (\$US 600). Half (50.4%) of the participants' families reported that they did not make ends meet.

Procedure

After IRB approvals in Thailand and the USA, the first author (principal investigator) met with interested students in an auditorium at a nursing school in Thailand and explained the study objectives and procedures. Students who decided to participate signed a consent form and filled out a questionnaire packet on the day of participation and placed the completed packet in a basket provided in front of the auditorium.

Variables and Instruments

Independent Variable: Worries

Worries are defined as constant troubling thoughts about someone or something. They are classified into two categories: the object of worries (micro vs. macro) and the domains of worries. Micro worries are constant troubling thoughts about self or loved ones. Macro worries are constant troubling thoughts about society or the world. Domain of worries refers to constant troubling thoughts about fields of life such as health, safety, social relationships, achievement, or economic concerns (Boehnke et al., 1998) Five open-ended questions created by the research team to capture the domain and objects of worries based on Boehnke et al.'s theoretical concepts, including their coping strategies used to

address their worries. The questions were tested in 10 nursing students in each country and adjusted to achieve clarity and validity. Q1: What is your number one worry not related to school? Question 2: Do you plan on addressing your worry above. If yes, how? If no, why not? Question 3: What is your number one worry about being in the nursing program? Do you plan on addressing your concerns/worry above? If yes, how? If no, why not? Question 5: Please use this space to write anything else in relation to your moods/feelings, personal life, and/or your experience being in the nursing program.

Dependent Variable: Depressive symptoms

Depressive symptoms were defined as feelings of hopelessness, worthlessness, and guilt, often accompanied with problematic concentration, sleep, and suicidal ideation (Radloff, 1977). The 20-item, 4-point-Likert Center of Epidemiologic Studies Depression Scale (CES-D, Radloff) was used to measure depressive symptoms as reported by the participant in the past seven days. The Likert scale ranged from 'rarely or none of the time' (0) to 'most or all of the time' (3). Scores from all of the 20 items were summed to create total depressive symptoms scores. Higher scores indicate greater depressive symptoms. The CES-D has been translated into Thai with back translation. It has been widely used in Thailand with good validity and reliability (Srisaeng, 2003; Ross et al., 2009). For example, the CES-D's construct validity is evidenced by its positive correlations with self-esteem and social support and its reliability of over .85 in a previous Thai study (Ross et al., 2009). In the present study Cronbach's alpha was .85.

Data Analysis

Qualitative analysis

Worries

We used directed content analysis starting with theory or relevant research findings (Hsieh & Shannon, 2005) to analyze the narrative data of worries. We applied Boehnke et al.'s (1998) conceptual definition of worries, incorporating the object and domain of worries to guide our study's initial codes. For the object of worries, a statement indicating a worry about self or loved one(s) was classified under micro worries, while that about society or the world was assigned under macro worries. As for the domain of worries, a statement of worry was classified under its corresponding field of life: health, relationships, meaning, achievement, or financial difficulties etc. The research team analyzed and finalized resulting categories based on Boehnke et al.'s definition. Also, quotes that demonstrate strong relationships between worries and depressive symptoms were extracted and a case exemplar is presented at the end of the findings section.

Quantitative analysis

Worry statements were tallied into frequencies to create a total worry score for each participant. To examine the relationship between worries and depressive symptoms, the total scores for depressive symptoms were regressed on age, gender, level in the program (junior or senior), and family income as controlled variables in step one of hierarchical multiple regression. Subsequently, depressive symptoms were regressed on worry scores in Step 2.

Findings

Qualitative Findings

Based on Boehnke et al.'s (1998) conceptual definition of worries, the object and domain of worries were applied to our analysis (Table 1). Out of

112 students, 86 reported at least one worry, with a total of 282 worries reported.

The Object of Worries

All but 2 worries were micro worries. Most of the participants in our study had worries about themselves and/or their loved ones, while only two participants had worries about society—namely traffic and weather. They stated: “I am worried about the weather. It is too hot here in this city,” and “The traffic jam is awful. I am wondering if it is going to get better ever.” The Domain of Worries

As presented in Table 1, six fields of life worries were generated from participants' narratives. These fields include school and time management, health, interpersonal relationships, economic concerns, national board examination, and professional concerns.

School and Time Management

The highest number of worries (42.9%) reported by our participants were in the field of school and time management. School and time management were grouped together because they are intertwined. Many participants were worried about school (class work and clinical), thus creating for them time management issues. As nursing students, they found that they had too many assignments with a short turn-around time, and they feared getting bad grades. Some participants had a hard time understanding the subject matter of nursing courses and perceived themselves as not having adequate skills to function comfortably in clinicals. Often, they also struggled with having inadequate rest and relaxation. A 21 year-old, female, senior student stated:

I feel very stressed out from too much work... too many assignments...no time to rest...no time to relax...no weekends...no holidays...only case study... case study...and case study. Each faculty pressures

us and expects high quality work from us with not much time available...no time to sleep...just work...work...work...have to turn in assignments on time. How would the faculty expect high quality work from us in such limited time...expecting high quality work in a fast turnaround manner? It can end up with low quality work and a low grade received...I am tired and worried that my body will not be able to hold up any longer.

A 20 year-old, male, junior student who was juggling his time, trying to fulfill his multiple duties reported:

I am stressed out and worried about how little available time I have. I have to work to support myself. Sometimes it takes me 2 to 3 hours to travel between my work place and home. When I get home, I am exhausted but I have so much homework and assignments to do. I don't like to live in a dorm because I am a loner. Also, if I were to live in a dorm, I would not be able to have my beloved cat with me. My family doesn't like my cat. I am very busy with so many things, trying to manage time for my school, my girl friend, and my cat. I am also very worried about clinical because I don't have enough clinical skills.

Economic Concerns

About one-fifth (17%) of the participants reported financial problems in their families. They were worried about family members, mostly their parents or siblings, who supported them financially. A 21 year-old female, senior student with a very low family income of 5,000 Baht stated:

I feel really discouraged...and feel so bad for my parents. They have to work very hard to support me financially. I wish I could help them work but I have too much school work to be able to help them. I don't have time to help them. I am so worried about my parents.

Another student said:

I am worried and feel really bad for my big sister. She has a lot of expenses and does not make ends meet. She has to spend money on her necessities, plus my tuition fee, and so on. Her monthly income never covers all of her expenses. (21 years old, female junior, median family monthly income = Baht 20,000)

Interpersonal Relationships

Forty-four worries (15.6%) related to troublesome interpersonal relationships with friends and faculty members were reported in this study. The strain of such relationships led the participants to feel stressed and overwhelmed which adversely affected them physically and emotionally. A female senior student reported:

Now I am so exhausted...too much work...having to do research project...doing community rotation with friends most of whom are very lazy and not responsible. This makes my head feel heavy from the stress. I feel really stressed out...can't breathe real well....sometimes I want to go to a place where no one knows me and where I know no one. It may help me feel better physically and emotionally... I want to feel relaxed...

Two other quotes from different students are presented below.

Many times I didn't do anything seriously wrong but [the faculty] scolded me vehemently. She (whom I respect like my mom) used words that hurt my feelings and made me feel worthless, as if I was dirt or gravel on the ground...and I was not to say anything to defend myself. What I wanted from her was that she could talk to me nicely, instead of yelling at me...finding fault with me...(23 years old, female, junior, student)

I am so bored of having to be with my clinical faculty who looks so grim all the time. I wish

she would smile sometimes, be lively, and be supportive to her students. I feel so exhausted physically and emotionally...so stressed out from clinical. (20 years old, female, junior student)

Health

Health issues, especially of loved ones, caused 27 participants (9.6%) to be worried. In many cases, health problems of a loved one co-occurred with other problems involving relationships and financial difficulties. As reported by some participants, such problems negatively affected their grades and time management in school. A 23 year-old female, senior student voiced her worries:

I am so worried about some problems in my family. My dad has had an affair with our neighbor, while my mom has been diagnosed with cirrhosis. I am real worried about my mom and feel so bad for her. I don't want her to be apprehensive and discouraged. These problems have affected my grades and our family life...

Another female student (21 years old, junior) said:

I want to go back home so that I can take care of my mom, grandma, and grandpa. My grandma is severely ill. I really want to go home. I wish I would have enough money and did not have to get a loan. This month is rough because we have mid-term exams every week. I know I will not be able to finish all of the readings. On top of that I have to be in the OB clinical.

Professional Concerns

Not all of the participants decided to enroll in the nursing program themselves. Many of them followed their parents' wishes to become nursing students. Therefore, some of the participants (8.9%) were not doing well in the program due to not really wanting to be a nurse. A 22 year-old, female senior

student stated:

I fear working as a nurse. I am worried that I will not make a good nurse and not be able to get along with my colleagues because I do not like to talk that much. I am worried about my career. Being a nurse may not work out well for me. The most important thing is that I never want to be a nurse. I have to live with what I don't like ...I don't like it at all...I don't feel motivated...

Another student said:

I feel very uneasy. I didn't want to be in a nursing program, but my parents wanted me to. I don't like working with people because I don't like to talk. Being a nurse, one needs to talk with one's patients. When I was in the OB rotation, I couldn't answer some questions the faculty asked me and she said that I had no OB knowledge. Therefore, she failed me and I had to do the OB clinical all over again. That made me feel even more discouraged... I don't have a good memory. It's hard for me to understand the subject materials...too much content for me. ...This semester I will try harder...I want my parents to be proud of me as a nurse... (21 years old, female, junior,)

National Board Examination

Seventeen students (6%) were worried about their future National Board Examination. They feared that they would not pass the exam. A 22 year-old male, senior student stated:

I am a senior and have a lot of things to do...work, papers, clinical...everything is graded. I hardly have any time to rest and have to go to bed at 1-2 am. everyday...I feel pressured because I want to have good grades. I have to read a lot and have to be prepared for the National Board Examination. I don't know if I will be able to pass the exam...

A female senior student reported:

I have heard that passing the national board exam is not easy. A couple of my friends could not make it last year. They have to try again. I am not a good student, and I am so worried that I will fail from the exam.

Quantitative Findings

The frequencies of worries ranged from 0 to 7 in this sample with the mean score of 2.7 (SD = 1.10). The depressive symptoms scores ranged from 4 to 45 (possible scores = 0-60) with the mean score of 19.8 (SD = 9.64). To examine the effects of worries on depressive symptoms, the total scores on depressive symptoms were regressed on controlled variables (age, gender, level in the program, and family income) in Step 1, and then on the scores of worries in Step 2, using hierarchical regression. Table 2 shows that the model in Step 1 is not significant - i.e., none of the controlled variables were predictors of depressive symptoms. In Step 2, however, when the effects of worries on depressive symptoms were evaluated, worries were positively associated with depressive symptoms ($\beta = .377$) and accounted for 13.6% of the explained variance in depressive symptoms.

A case exemplar

To cross-validate the quantitative findings of a significant positive relationship between worries and depressive symptoms in this study, a case exemplar is presented to provide in-depth information about the phenomenon. A 23 year-old, female student who was in her senior year and whose family did not make ends meet with a monthly family income of 25,000 Baht is used as a case exemplar. She received a worry score of 7 (highest score in the sample) and a depressive symptom score of 43 (second highest). Her quantitative scores were at the high ends and her

qualitative narratives correspond well to her quantitative scores. The participant reported her multiple worries (school, national board examination, financial difficulty, and future profession) with some symptoms of depression (a sense of worthlessness and hopelessness, a lack of energy, and sleep disturbances). The participant stated:

Right now I am so confused in my thoughts. I am afraid and worried about so many things which I can't tell anyone. I am so exhausted and don't want to know about things around me. I do not feel like doing anything and feel worthless. I also have had trouble sleeping...If I was to tell someone about my problems, it would be endless...personal problems and school problems...especially trouble at school. I am afraid that I will..fail in courses, not be able to pass the National Board Examination, and not be able to get a job. If I can't pass the courses and the Exam, there is nothing else I can do. My life will be worth nothing...and that will be really tough on my parents. I want to be able to graduate and get a job so that I can pay back the loan and to help my parents financially...

Coping strategies

Content analysis was performed to examine what had helped some students to have a more positive outlook towards life. Several students described available resources (especially emotional support from family and friends), practical strategies, and active coping strategies they had used to help them feel good and/or to deal with their worries.

Emotional support

Support from family and friends seemed to play a major role in decreasing worries of several participants. The response of one 21 year-old female junior student whose family monthly income was almost at the lowest end of the spectrum (10,000

Baht) was found to be significant. Although her family did not make ends meet, she stated that she had no worries (worry score = 0) and felt relaxed (depressive symptoms score = 4) because she had someone she could always turn to. She received the lowest worry and depressive symptoms scores among all participants in our study. She said:

I am happy with my life because I have someone who I can turn to. I am quite laid back, pretty relaxed. Let it be...it's the matter of time... tomorrow... there will be a new dawn of light...

Practical Strategies

Practical strategies used by several of our participants included activities (e.g., rest, relaxation) that indirectly helped them to cope with their worries. A female senior student (22 years old with a family income of 10,000 Baht) had a low score of 1 on worry (on national board examination) and a low score of 13 on depressive symptoms. This participant used practical strategies to help her combat worries.

When I feel worries and stressed out, I stop to rest by going to a show, listening to the radio, or taking a nap...these help me tremendously. I always believe that when one starts out well, one's products will be of high quality. When one feels exhausted and does not rest, one can get sick and not perform well.

Active Coping Strategies

Active coping strategies used by several participants in this study involved activities that helped them come up with a plan of action to follow. A 23 year-old male, senior student whose family did not make ends meet used various types of coping techniques and resources, including emotional support, practical strategies, and active coping. He had a worry score of 2 (economic concerns and school work) and a low depressive symptoms score of 14. He stated:

I don't procrastinate. Don't let the pig tail be covered by the dirt. Just take it easy at clinical and be happy with my assignments. Reading cartoons and novels, watching TV, going to the theater, playing games, having trips with friends and family, taking naps, having some bread, and talking with friends help me to feel relaxed.

Discussion

Our qualitative results showed that 280 worries out of 282 were micro worries pertaining to oneself and loved ones. This is not surprising because people tend to think about themselves and their loved ones before society and the world. In the domain of worries, the most frequent worries reported involved school, followed by financial difficulties and problematic interpersonal relationships. The fact that school work is the most significant worry for nursing students in Thailand is consistent with research findings among nursing students in Australia, Brunei, the Czech Republic, Malta, and the U.K. (Burnard et al., 2008; Gibbons et al., 2007; Lo, 2002). In our study, most problematic interpersonal relationships involved teacher-student relationships. Therefore, faculty who teach nursing students either in class or clinical need to be aware of how they can deal with students effectively and be conscious of their own impact on the students (Timmins & Kaliszer, 2002).

For our quantitative results, the number of worries was found to be a powerful predictor of depressive symptoms, controlling for age, gender, level in the program, and family income. Students with more worries reported more depressive symptoms. Our finding is in line with previous research conducted among 286 participants at a psychological research clinic in the USA (Diefenbach et al., 2001).

Diefenbach and coworkers found that worries significantly predicted the severity of depressive

symptoms when controlling for anxiety levels. In our study, the case exemplar as seen in part in the findings section supports the quantitative relationship between worries and depressive symptoms by providing rich information and an in-depth description of the relationship between worries and depressive symptoms in the life of a Thai nursing participant. Thus, an important implication of our study is that Thai nursing students should be screened and assessed with regard to their worries. Appropriate measures should be created to help imperiled students cope with such worries and, in turn, to prevent development of depressive symptoms.

Our research team used content analysis to examine the coping strategies our participants used to deal with their worries. Results showed that students who had fewer worries and less depressive symptoms were those who used available resources (e.g., emotional support from family and friend), practical strategies (e.g., rest, take a nap, listen to music etc.), and active coping strategies (e.g., work hard, do not procrastinate). These findings are consistent with previous research among baccalaureate nursing students in Australia, Taiwan, and Thailand (Lo, 2002; Ross et al., 2005; Sheu, Lin, & Hwang, 2002). Sheu and colleagues reported that Taiwanese students who used active coping strategies or had solving problem behaviors experienced less physical-psychological-social symptoms than those who did not use such coping strategies. Ross and co-workers found that the more the Thai nursing students received emotional support from family and friends, the fewer depressive symptoms they experienced. Therefore, encouraging nursing students to seek emotional support from friends and family will be helpful. Furthermore, families should be informed that emotional support to students can help decrease depressive symptoms among nursing students. This may encourage the families to increase

their emotional support to the students. Sharing findings with Thai nursing students may encourage them to cope with their worries more effectively by using some of the coping strategies reported in this study that fit with their preferences. Finally, a training program created to help Thai nursing students to effectively cope with their worries will be beneficial.

The research team also shared its research findings with the school administrators. The administrators were receptive of the findings and said that they would develop multi strategies to help decrease worries among their nursing students. Such strategies could include for example having a faculty retreat in order to brainstorm ways to help students, possibly by reducing unnecessary assignments, creating peer support groups, and encouraging students to seek emotional support from their families. As mentioned, it will also be helpful to inform families about our research findings and the importance of emotional support. School orientation day is suggested as a good time to introduce our findings, followed by reminders to students and their families via regular mail or email.

Because there were only two macro worries, we did not examine their associations with depressive symptoms since statistical analysis would not have enough power to detect an association. Also, we did not examine the relationships between different fields of worries (school and time management, health, etc.) and depressive symptoms due to the inter-correlation among these life fields. In other words, most of our participants did not report one distinct worry but a combination of two or more worries. Life is complex. It would have been impossible to disentangle the association between depressive symptoms and each field of worry-one from another.

The strengths of this study include using open-ended questions to elicit worries from our participants as opposed to using a standardized Likert scale-type questionnaire. People who elect to

respond to open-ended questions usually feel strongly about their answers. The other strength of our study is the use of mixed methods methodology. Narratives from participants were incorporated to cross-validate our quantitative findings and these provided rich information about the phenomenon of worries and depressive symptoms.

The limitations of our study include recruiting nursing students from only one nursing school in central Thailand. Thus, generalization of the findings could be said to be limited to nursing schools in the central part of Thailand. Also, the causal relationship between worries and depressive symptoms is not definite due to the nature of our cross-sectional study. Future studies should include nursing students in other Thai regions. Longitudinal studies using semi-structured in-depth interviews might gain richer information about the potential worries and depressive symptoms of baccalaureate nursing students. Finally, testing the effects of an intervention (e.g., using appropriate coping strategies, emotional support) on worries and depressive symptoms among Thai nursing students will be helpful.

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