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Impact of psychosocial factors on academic performance of nursing students in Thailand

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Abstract

Purpose – The purpose of this study is to investigate the psychosocial factors that impact the academic performance of nursing students.

Design/methodology/approach – A cross-sectional study was conducted with 767 nursing students from three nursing colleges in Thailand. Instruments included Counseling Center Assessment for Psychological Symptoms and Rosenberg Self-Esteem Scale. Path model analyses with the maximum likelihood method were utilized to examine the proposed model. Model fit was estimated using multiple indexes, including chi-square/df ratio (χ^2/df), comparative fit index (CFI), Tucker-Lewis index (TLI) and the root mean square error of approximation (RMSEA).

Findings – Results indicated that family distress, emotional negativity, self-esteem and substance use were factors that related to nursing students' academic performance. Findings of path analyses indicated that the model demonstrated good fit: χ^2 (2, N = 767) = 3.11, p = 0.48; χ^2/df = 1.56; CFI = 1.00; TLI = 0.99; RMSEA = 0.027, (90% CI = [0.000, 0.082], PCLOSE = 0.68).

Originality/value – While prior research has examined some facets leading to academic success for nursing students, psychosocial factors have not received adequate attention. This study presents a model of family and individual psychosocial factors that impact academic performance of nursing students along with recommendations to help improve their well-being.

Keywords Family distress, Emotional negativity, Self-esteem, Substance use, Academic performance

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Introduction

Globally, nursing students face various challenges during their college years, including academic, professional, financial and psychosocial issues. Many of these challenges could impede their academic performance. Worldwide shortage of nurses has called for responses from nursing educators to offer quality training and prevent attrition [1]. Several studies have found that up to 33% of nursing students drop out of their programs [2–4]. Psychological well-being of nursing students is especially important considering their need to provide quality care for patients. Previous research shows that stress and mental health issues can lead to decreased learning [5], school attrition [6, 7] and decreased quality in patient care and clinical performance [8, 9]. It is vital to identify stressors and other psychosocial factors, so nursing programs can offer interventions to improve student academic performance and reduce attrition.

Among nursing students globally, factors found to be associated with emotional negativity, including depressed feelings and stress, are familial disharmony, low self-esteem, alcohol consumption, loneliness, conflicts between personal and college demands, work overload, disinterest in the academic course and transition to college [10–18]. Compared with other college students, nursing students are found to have significantly more stress, anxiety, sleep disturbances and stress-related illnesses [19] as well as to more likely to binge drink [20]. While only 6.9% of the general student population reported tremendous stress, 17.6% of nursing students reported tremendous stress and 52.3% of nursing students reported above average stress [19]. Nursing students are also found to have limited coping skills and a potential risk to their well-being from high levels of stress [21].

In general, college students are prone to major stressors due to life transition [19] and more specifically, nursing students experience high levels of stress due to academic and personal stressors [22]. Other stressors experienced by nursing students include intensity of academic workload, learning experience, financial pressure, time management and lack of free time [18, 23–26]. In addition to academic and personal stress, nursing students also face the stress from clinical training. The nursing profession has been associated with high chronic stress and burnout [27, 28]. In addition, low self-esteem has been shown to negatively affect mental health and stress [29–31], including among nursing students [32].

There are limited studies that explored the psychosocial issues of nursing students in Thailand. One study finds that nursing students experienced significantly more psychosocial difficulties than non-nursing students in Thailand [33]. Another study reveals moderate levels of anxiety and high levels of depression among Muslim nursing students in Thailand [34]. A couple of studies also find negative associations between self-esteem and depression [34, 35].

Studies in a few countries have been conducted on psychosocial factors that impact the academic performance (as measured by grade point average) of nursing students [36–39], but limited studies have been conducted with Thai nursing students [40]. One study finds emotional intelligence as a significant predictor of academic achievement [36]. Another study finds performance self-efficacy to be significant predictor of grade point average [37]. Anxiety and depression are also found to negatively affect grade point average [38]. For Thai nursing students, learning environment is found to correlate with grade point average [40].

Altogether, there is remarkable evidence that nursing students experience higher levels of psychological challenges than the general college student population. This study seeks to understand the influences of four specific psychosocial factors (family distress, self-esteem, emotional negativity and substance use) that impact academic performance of Thai nursing students in order to provide recommendations to help nursing students.

The conceptual framework depicted in Figure 1 represents the hypothesized academic performance model for nursing students. It is hypothesized that family distress would impact emotional negativity, self-esteem and substance use, which would in-turn drive academic

performance. Further, emotional negativity, self-esteem and substance use would directly impact academic performance. Self-esteem is thought to predict emotional negativity and substance use, while emotional negativity would directly drive substance use. Higher levels of familial distress would predict lower self-esteem, greater emotional negativity and higher rates of substance use. In turn, lower self-esteem, greater emotional negativity and higher rates of substance use would to lead to lower academic performance.

Methods

This study was conducted at three nursing colleges in Thailand. All the nursing students from each college were invited to participate in this study. After reading the informed consent form, those who volunteered to participate answered the survey questions anonymously. The self-report paper-based survey took approximately 20 min to complete.

A total of 767 nursing students from three nursing colleges participated in this study. Majority (95%) of participants were female. Participants were evenly distributed across all four years of the nursing program (between 23.5% and 25.9% per academic level). Average age was 20.9 (SD = 2.23, *Range* = 18–37). Average Grade Point Average (GPA) was 2.89 (SD = 0.38, *Range* = 1.98 to 3.97).

Instruments

Counseling Center Assessment for psychological Symptoms–Thai (CCAPS-Thai). In the present study, the CCAPS-Thai was used to assess the mental health of nursing students. CCAPS is the most widely used instrument to assess psychological symptoms among college students in the United States. CCAPS-Thai has been translated and validated for use among college students in Thailand [41]. The six subscales of CCAPS-Thai include Emotional Negativity ("I feel irritable"), Substance Use ("I drink alcohol frequently"), Eating Concerns ("I eat too much"), Anxiety ("I become anxious when I have to speak while in public"), Family Distress ("My family gets on my nerves") and Positive Self ("I make friend easily"). Each of the 41 items is rated on a five-point Likert scale ranging from 0 (not at all like me) to 4 (extremely like me). Except for the Positive Self subscale, higher scores reflect more psychological symptoms. For the present study, the Cronbach's alphas for the six subscales were: 0.86 (Emotional Negativity), 0.79 (Substance Use), 0.80 (Eating Concerns), 0.80 (Anxiety), 0.67 (Family Distress) and 0.67 (Positive Self).

Rosenberg Self-Esteem Scale (RSES). The Thai version of the RSES [42] was used in this study to measure global self-esteem. This scale has been used in several studies to assess the self-esteem of college and nursing students in Thailand [34, 35]. The RSES consists of 10 items which are answered on a four-point Likert scale ranging from 1 (strongly agree) to 4 (strongly disagree). Higher scores indicate higher self-esteem. The Cronbach's alpha for the RSES was 0.78 for the present study.

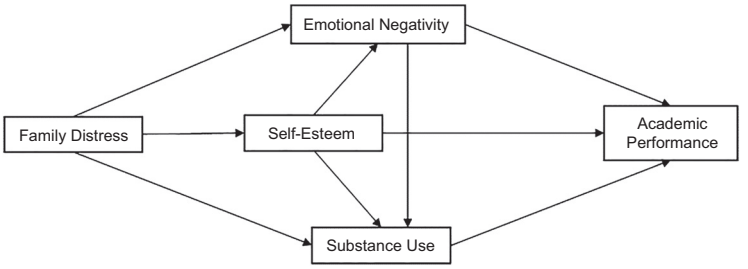


Figure 1.
Conceptual model for nursing student's academic performance

Academic performance for this study was measured by the self-report overall grade point average (GPA) based on the scale of 0.00 to 4.00, with 4.00 being the highest level.

Statistical analyses

IBM Statistical Package for the Social Sciences (SPSS) Statistics and Analysis of Moment Structures (AMOS) 24.0 were used for data analyses. Path model analyses with the maximum likelihood method were used to examine the proposed model. Model fit was estimated using multiple indexes, including chi-square/df ratio (χ^2/df), comparative fit index (CFI), Tucker-Lewis index (TLI) and the root mean square error of approximation (RMSEA) [43]. Good model fit was estimated by the following standards in the fit indexes: having a nonsignificant chi-square value, χ^2 /df < 3, CFI ≥ 0.95, TLI ≥ 0.95, and RMSEA ≤ 0.06.

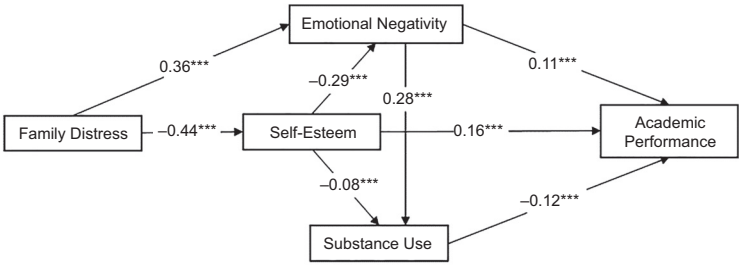
Ethical issue

This study was approved by The Institutional Review Board for Protection of Human Subjects approval (Reference# 17–40).

Results

Findings of path analyses indicated that the hypothesized model demonstrated good fit: χ^2 (1, N = 767) = 0.50, p = 0.48; CFI = 0.99; TLI = 1.00; RMSEA = 0.010, (90% CI = [0.000, 0.085], PCLOSE = 0.77). However, the results indicated that the path from family distress to substance use was not significant (β = 0.066, p = 0.106). An alternate model with this nonsignificant path being removed was also examined and the findings indicated good fit: χ^2 (2, N = 767) = 3.11, p = 0.48; χ^2 /df = 1.56; CFI = 1.00; TLI = 0.99; RMSEA = 0.027, (90% CI = [0.000, 0.082], PCLOSE = 0.68). All paths in the final model were found to be significant. Although both models showed good fit with the data, the second model was selected as the final model, as it provided clearer explanations on the significant direct and indirect effects of the psychosocial variables on behavior and academic performance.

Figure 2 displays the final model and the standardized beta weight for each path. Specifically, academic performance was positively correlated with self-esteem (β = 0.165, p < 0.001) and emotional negativity (β = 0.110, p = 0.007), but negatively correlated with substance use (β = −0.123, p = 0.001). Together, approximately 4% of variance in academic performance was explained by predictors in the model. In addition, substance use was positively correlated with emotional negativity (β = 0.280, p < 0.001), but negatively correlated with self-esteem (β = −0.083, p = 0.030). These two predictors accounted for approximately 11% of variance in substance use. Emotional negativity was positively correlated with family distress (β = 0.358, p < 0.001) and negatively correlated with self-



Note(s): *p < 0.05, **p < 0.01, ***p < 0.001

Figure 2.
Final model with standardized regression coefficients

esteem ($\beta = -0.295$, $p < 0.001$). Approximately 31% of variance in emotional negativity was explained by these two variables.

Next, the bootstrap method provided in AMOS with 500 bootstrap samples and bias-corrected 95% confidence interval (CI) was used to test the significance of the indirect effects embedded in the model. A significant indirect effect was indicated by the 95% CI's upper and lower bound not including zero. Result indicated significant effects on the following indirect paths: (1) family distress → self-esteem → emotional negativity (95% CI = [0.096, 0.169], $p = 0.002$); (2) self-esteem → emotional negativity → substance use (95% CI = [−0.125, −0.048], $p = 0.002$); (3) family distress → self-esteem / emotional negativity → substance use (95% CI = [0.123, 0.241], $p = 0.002$); (4) emotional negativity → substance use → academic performance (95% CI = [−0.070, −0.013], $p = 0.002$); and (5) from family distress to academic performance (95% CI = [−0.078, −0.003], $p = 0.034$). The findings supported the complexity of the relations among the selected psychosocial factors and outcome variables.

Discussion

While prior research has examined many factors for academic success of nursing students [44, 45], psychosocial factors such as self-esteem and emotionality – particularly revolving around the family – have generally not been the focus. The present study sought to test a model of familial and individual psychosocial dynamics influencing academic performance for nursing students. Looking across factors such as family distress, self-esteem, emotional negativity and substance use, the model adequately demonstrated the ways these psychosocial processes drive academic performance for nursing students.

Family distress was found to significantly drive self-esteem and emotional negativity, and these two factors, in turn, impact academic performance. As demonstrated by the present findings, the importance of family distress should not be ignored by faculty, staff, administration and the institution at each of these policy levels. Support services are needed to address distress caused by the familial context and aid nursing students in their navigation of familial issues. An initial assessment is recommended to help nursing students understand if more engagement with family is needed for the student to feel more support or if less family engagement is needed in the case of family history of abuse. Referral to professional counseling might also be warranted. If ignored, family distress moves on to negatively impact self-esteem and increase emotional negativity. These factors, consequently, play a role in how a student approaches and deals with academic life which further impacts academic performance. Thus, when hoping to foster high academic performance for nursing students, addressing familial issues through student support services is an important step for each nursing program.

Aside from self-esteem, emotional negativity was found to drive substance use which, in turn, impacts academic performance. Therefore, another area of support for student services would be through fostering positive emotional regulation strategies in students as well as substance abuse prevention and treatment. It should be highlighted that emotional issues, traditionally ignored in higher education, demonstrates itself to be a prominent factor in student mental health and academic performance.

An interesting result demonstrated by the data was the directionality of the impact of emotional negativity on academic performance. The positive direction of the beta for the path between emotional negativity and academic performance is surprising, given that one would assume an increase in emotional negativity would lead to lower academic performance. However, this finding possibly sheds light on the complex nature of the role of emotionality and academic performance. It is possible to conceive that certain level of emotional negativity, including feeling sad and angry [41] may lead to increased motivation and achievement. Nursing students with increased emotional negativity may be driven to work harder and thus

improve their academic performance. Further research in this area is needed in order to tease out the nature of this complex relationship.

An important implication from the results of this study is for the nursing programs to help nursing students address family, substance, personal and emotional issues in order to improve academic performance. But some nursing students might not be ready to seek help or might keep their mental health issues to themselves out of fear or stigma. An alternative recommendation for improving mental health and well-being in nursing students might be workshops or other interventions. Several studies have shown the effectiveness of different types of alternative interventions for nursing students including meditation, relaxation training, hypnosis, breathing exercises and study skills [46, 47]. Specifically for Thai nursing students, alternative interventions that have been found to be effective in reducing psychological symptoms include mindfulness meditation and biofeedback training [48, 49]. Other alternative approaches that could be helpful to Thai nursing students include peer mentoring program, wellness dialogue group and mental health awareness campaign [50].

Limitation of this study includes the study being conducted only in one country. Future studies could replicate this study with nursing students in other countries.

Conclusion

This study identified a model with four familial and individual psychosocial factors that impact academic performance of nursing students: family problems, emotions, self-esteem and substance use. Several culturally relevant interventions can be implemented by nursing programs to help their students cope better with their issues. Psychologically healthy nursing students will not only do well academically but they will also graduate and become healthy nurses to serve their future patients.

Conflict of Interest: None

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