

Factors Affect to Academic Performance of Nurse Anesthetist Students in Vietnam

Nguyen Van Chinh^{1*}, Nguyen Thi Kim Cuc^{1*}, Bui Dinh Hoan¹,
Nguyen Hung Hoa¹

¹Nurse Anesthetist Department, University of Medicine and Pharmacy in Ho Chi Minh City, Vietnam

*Corresponding Author: Nguyen Van Chinh, Nguyen Thi Kim Cuc

Abstract

Introduction: The students' academic performance illustrates an essential role in producing the best quality graduates and is directly linked with any country's social and economic development.

Method and objective: A cross-sectional survey was conducted to determine the influencing factors to academic performance in 403 nurse anesthetist students in the University of Medicine and Pharmacy at Ho Chi Minh City.

Result: The reasonable academic performance rate is at 40.9%, and the factors which affected the academic performance are clinical diary with 2.33-fold higher ($p < 0.001$ and 95% confidence interval (2.155 – 3.450)), critical reading medical articles with 1.64-fold higher ($p < 0.001$ and 95% confidence interval (1.304 – 2.306)) and self-reflection with a 1.57-fold higher rate ($p < 0.001$ and 95% confidence interval (1.196 – 2.049)).

Conclusion: 40.9% results from the rate of Academic Performance of Nurse Anesthetist at University of Medicine and Pharmacy at Ho Chi Minh city. The academic performance of Nurse Anesthetist increases whenever students use the clinical diary, critical reading medical articles, and self-reflection at school.

Keywords: Academic Performance, Self-Reflection, Critical Reading, Nurse Anesthetist

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I. Introduction

The academic performance involves the ability of students to cope with their studies with the various tasks assigned to them by their instructors. It plays an essential role in preparing student nurses for professional competence in the field [1]. Numerous factors affect the academic progress and learning performance of students: age [2], gender, clinical practice, clinical diary [3], critical reading medical articles, school education, residential area students come from, medium of instruction in schools, tuition trends, daily study hours, accommodation and the socio-economic background of the parents or guardians [4].

In Vietnam, many researchers try to find the factors that affect academic performance by stimulating students' reflection [5]. Some learning strategies enhance the students' reflection to develop academic performance [6]. In addition, some researches enhanced students' learning motivation to get better academic performance [7]. For example, in nursing education, Nguyen Hung Hoa et al. (2021) used the Clinical Diary and Learning Journal to Improve academic performance in clinical circumstances.

This paper tries to determine whether clinical practice, clinical diary, critical reading of medical articles, self-reflection, self-insight enhanced the academic performance of the nursing anesthetist.

II. Methodology

Research design and Participants

We conducted a cross-sectional study on 403 nurse anesthetist students in the University of Medicine and Pharmacy at Ho Chi Minh city in the school year 2020-2021 to determine the proportion of students with good academic performance and factors related to students' achievement, including demographic information, academic year, learning skills, and private self-consciousness. In addition, the participants were informed about the purpose of the research.

The questionnaire and collect data

Academic achievement was evaluated based on the student's grade point average scores at the end of the semester. An excellent academic performance defined by the undergraduate grading system was at least grade B.

In the study, the Self-Reflection and Insight Scale was used to measure student's private self-consciousness [8]. The scale consists of 20 items with a 7-point Likert scale type questionnaire asking the participants to agree or disagree with 20 statements. The answers to each question were scored on a scale of one to seven (1= strongly disagree, 7=strongly agree). The questionnaire assessed two factors, including twelve items of self-reflection and eight items of insight.

Ethical Consideration

The Ethics Council approved this research of the University of Medicine and Pharmacy at Ho Chi Minh City, Vietnam. After we clearly explained the study's objectives, the participants voluntarily signed the consent form to participate in the study. Furthermore, we ensured that participants were not affected by any benefits in their work.

III. Results

Table 1. Descriptive characteristics of participant samples (n=403)

Characteristics	Frequency	Percentage
Gender		
Female	299	74.2
Male	104	25.8
Academic year		
First	132	32.7
second	127	31.5
Third	82	20.4
Fourth	62	15.4
Clinical practice		
No	260	64.5
Yes	143	35.5
Clinical Diary		
No	289	71.2
Yes	116	28.8
Critical Reading Medical Articles		
No	247	61.3
Yes	156	38.7
Good academic performance		
No	238	51.9
Yes	165	40.9
Self-insight score	36 (6.19)*	
Self-reflection score	55 (9.93)*	

*Mean (Standard Deviation)

In terms of gender, female students account for 74,2%, approximately three-fold higher than male students. Students in the first academic year make up the highest proportion (32,7 %), whereas the lowest in the fourth academic year is 15,4 %. Undergraduate undergraduates with clinical practice, clinical notes, and critical reading medical articles are 35,5%, 28,8%, and 38,7%. The means of self-insight and self-reflection scores are 36±6.19 and 55±9.93, correspondingly.

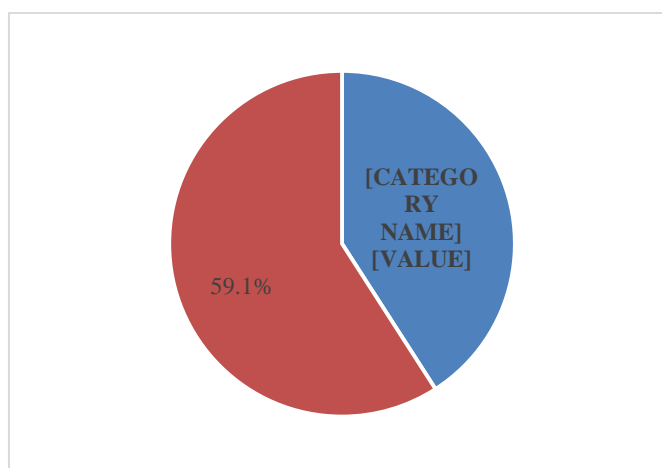


Figure 1. Nurse anesthetist students with good academic performance

The proportion of nurse anesthetist students with good academic performance at the University of Medicine and Pharmacy at Ho Chi Minh city in the academic year 2020-2021 is 40.9%.

Table 2. Relationship between good academic performance and characteristics of participants (n=403)

Characteristics	Good academic performance		OR	P-value	95% Confidence Interval
	Yes Frequency (%)	No Frequency (%)			
Gender					
Female	127 (42.5)	172 (57.5)			
Male	38 (36.5)	66 (63.5)	0.86	0.288	0.646-1.144
Academic year					
First	37 (28.0)	95 (72.0)			
second	28 (22.1)	99 (78.0)			0.412-1.279
Third	43 (52.4)	39 (47.6)	1.59	<0.001	1.205-2.903
Fourth	57 (91.9)	5 (8.1)			2.168-4.96
Clinical practice (Yes)					
	99 (40.9)	44 (30.8)	2.73	<0.001	2.155-3.450
Clinical diary (Yes)					
	80 (69.0)	36 (31.0)	2.33	<0.001	1.876-2.890
Critical reading medical articles (Yes)					
	84 (53.9)	72 (46.2)	1.64	<0.001	1.304-2.066
Self-insight score	-	-	1.08	0.481	0.865-1.359
Self-reflection score	-	-	1.51	<0.001	1.197-1.901

Univariate analysis found that factors related to the good academic performance of participants include academic year, clinical practice, clinical notes, critical reading medical articles, and self-reflection score. However, no relationship was found between good academic performance and other characteristics of students, including gender and self-insight score.

Table 3. Factors related to good academic performance by multivariate logistic regression model (n=403)

Characteristics	OR	P-value	95% Confidence Interval
Academic year	1.72	0.007	1.164-2.545
Clinical practice/Clinical diary			
No/No	1(reference)		
No/Yes	2.44	0.132	0.765-7.787
Yes/No	2.05	0.152	0.767-5.502
Yes/Yes	3.03	0.012	1.281-7.171
Self-reflection score	1.57	0.001	1.196-2.049

Multivariate logistic regression analysis found three factors related to the good academic performance among nurse anesthetist students in the University of Medicine and Pharmacy at Ho Chi Minh city, including academic year, clinical practice- clinical notes, and self-reflection score. Specifically, every following academic year, the proportion of students with good academic performance increased 1.72-fold compared to the previous, with a 95% confidence interval (1.164-2.545). For students attending clinical practice with clinical notes, there is a 3.03-fold rise in the proportion of good academic performance. In addition, our study figured out that every 7- point increase of self-reflection score is associated with a 1.57-fold higher rate of students with good academic performance, 95% confidence interval (1.196-2.049).

IV. Discussion

In our study, the majority, 74.2%, were females, whereas 25.8% were males. This was in line with that nursing was a female-dominated profession. Nevertheless, our finding indicated that there was no gender difference in students' academic outcomes. Thus, our study result was similar to Chan et al. [9] and Orji et al. [10].

Additionally, our results illustrated that clinical practice and clinical notes significantly impact nurse anesthetist's performance. These findings suggest that enhancing students' clinical learning skills and supportive clinical learning environment is necessary to improve their achievement, consistent with the existing literature that involved clinical education [11]. The clinical learning environment and supervision support the development of future healthcare professionals' clinical competence. The supervisory relationship was shown to have a significant effect on the outcomes of students' experiences. This study recommends planning educational programs for supervisors of healthcare students to enhance supervisors' pedagogical competencies in supervising students in clinical practice [12].

Contrary to the previous study on students' academic achievement at the University of Western Australia [13]. Our study indicated that there was a significant relationship between students' self-reflection and

their academic performances. The other results suggested that self-reflection on how and what students have learned leads to improvements in academic performance [14]. However, our study design was cross-sectional. Therefore, further research is required to examine the cause-effect relationship on academic performance.

V. Conclusion

This paper presents the percentage of the academic performance of Nurse Anesthetist and determines the factors that affect academic performance. The good academic performance of a Nurse Anesthetist determines 40.9 percent at the University of Medicine and Pharmacy at Ho Chi Minh city. Furthermore, the academic performance will increase 2.33 times when students use the clinical diary, 1.64 times when students use critical reading medical articles, and 1.57 times when students achieved self-reflection. These results also recommended that the student design the activity for the student to implement a clinical diary and critical reading medical articles to increase self-reflection in nursing education.

References

- [1] D. I. Dimkpa, B. Inegbu, and N. Buloubomere, "Student nurses perception of poor academic performance in Bayelsa State, Nigeria," *Global Journal of Human Social Science, Linguistics & Education*, vol. 13, no. 14, pp. 1-6, 2013.
- [2] I. Blackman, M. Hall, and I. Darmawan, "Undergraduate Nurse Variables that Predict Academic Achievement and Clinical Competence in Nursing," *International Education Journal*, vol. 8, no. 2, pp. 222-236, 2007.
- [3] N. H. Hoa and N. A. Tuan, "Using a Clinical Diary and Learning Journal to Improve Reflective Competence for Nursing Students in Vietnam," *Universal Journal of Educational Research*, vol. 9, no. 7, pp. 1464-1471, 2021.
- [4] M. B. Dube and P. R. Mlotshwa, "Factors influencing enrolled nursing students' academic performance at a selected private nursing education institution in KwaZulu-Natal," (in eng), *Curationis*, vol. 41, no. 1, pp. e1-e7, 2018.
- [5] N. H. Hoa and N. A. Tuan, "Stimulating the Students' Reflection," *IOSR Journal of Research & Method in Education (IOSRJRME)*, vol. 9, no. 6, pp. 18-21, 2019.
- [6] N. H. Hoa and N. A. Tuan, "Learning Strategies for Improving Reflection in Engineering Education in Vietnam," *IOSR-Journal of Research & Method in Education (IOSR-JRME)*, vol. 10, no. 1, pp. 06-09, 2020.
- [7] T.-L. Nguyen, "Enhancing students' learning motivation for better academic performance: An empirical case in Dong Nai Province, Vietnam," *Advanced and applied sciences*, vol. 6, no. 3, pp. 17-22, 2019.
- [8] A. M. Grant, J. Franklin, and P. Landford, "The self-reflection and insight scale: a new measure of private self-consciousness," (in eng), *Social Behavior and Personality*, vol. 30, no. 8, pp. pp. 821-836, 2002.
- [9] Z. C. Y. Chan *et al.*, "Gender differences in the academic and clinical performances of undergraduate nursing students: A systematic review," (in eng), *Nurse Education Today*, vol. 34, no. 2014, pp. pp. 377-388, 2013.
- [10] E. A. Orji, E. Archibong, N. P. Ogbonnaya, F. Nkpoyen, and A. F. Edet, "Gender influence on academic performance of nursing students in Nigerian Universities," (in eng), *Journal of Critical Reviews*, vol. 8, no. 1, pp. pp. 1087-1094, 2021.
- [11] K. F. Phillips, L. Mathew, N. Aktan, and B. Catano, "Clinical education and student satisfaction: An integrative literature," (in eng), *International Journal of Nursing Sciences*, vol. 2017, pp. pp. 1-9, 2017.
- [12] S. Pitkänen *et al.*, "Healthcare students' evaluation of the clinical learning environment and supervision - a cross-sectional study," (in eng), *Nurse Educ Today*, vol. 62, pp. 143-149, Mar 2018.
- [13] S. E. Carr and P. H. Johnson, "Does self-reflection and insight correlate with academic performance in medical students?," (in eng), *BMC Medical Education*, 2013.
- [14] M. D. Lew and H. G. Schmidt, "Self-reflection and academic performance: is there a relationship?," (in eng), *Adv Health Sci Educ Theory Pract*, vol. 16, no. 4, pp. 529-45, Oct 2011.

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