

Factors associated with academic motivation in nursing students: A cross-sectional study

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Abstract

Academic motivation encourages people to participate in learning activities and directs, maintains, and determines the intensity of learning behaviors. Therefore, nursing students require high-quality academic motivation to continuously and effectively improve their medical knowledge and skills continuously and effectively. This study measures nursing students' academic motivation and identifies the associated factors. A cross-sectional study design was used for this research method. The total sample included 237 undergraduate nursing students. The data were collected from October to November 2022 in a public university located in Southwestern Vietnam. The level of academic motivation was measured using the Vietnamese version of the Academic Motivation Scale. The data were analyzed using the independent Student's t-tests, ANOVA, Pearson's correlation, and regression analysis. The study showed that nursing students had high academic motivation. However, there were still more than one-third of students (39.3%) whose quality of academic motivation was not good. Through simple linear regression analysis, it showed that appropriate training regulations of the school; getting support/questions answers or good examples in learning from lecturers/medical staff at the clinical practice site; joining a club about learning; intending to teach in the field of nursing, ability to deal with difficulties were the factors that affect nursing students' academic motivation. Many associated factors influence the academic motivation of nursing students. Further effective interventions are needed to address this issue.

Keywords: academic motivation; nursing education; nursing students; vietnames

1. Introduction

Nurses' care techniques and services directly affect people's health and lives. Nursing knowledge and practice must be based on a solid scientific basis and kept up to date (Abu-Baker et al., 2021; Dagne & Beshah, 2021). The field of medicine has an enormous amount of knowledge. It is constantly changing, updating, and expanding at an increasingly rapid rate. In 2020, the estimated time for medical knowledge to double was only 73 days (Densen, 2011). Thus, to keep up with the development of medical knowledge, nurses must strive to accumulate and improve professional knowledge and skills when they study at school and while working. Therefore, right from when nurses are at school, they must have high-quality academic motivation and maintain it throughout their nursing career.

Academic motivation (AM) motivates people to participate in learning activities and directs, maintains, and determines the intensity of learning behaviors (Reeve, 2017). Many factors influence a person's academic motivation and can change over time (Nilsson & Warrén Stomberg, 2008; Rafii et al., 2019; Raza et al., 2022). High-quality academic motivation is less affected by external factors and is maintained for a long time. The quality of academic motivation is assessed by the degree of self-determination of the motivation (Roth, 2019). The groups of academic motivation are arranged in ascending order of self-determination as follows: intrinsic motivation, extrinsic motivation, and

motivation (Vallerand et al., 1992). The lowest level of self-determination is a complete lack of self-determination and motivation to learn. The highest levels of self-determination are self-motivated and self-determined, learning behaviors driven by the interest, enjoyment, and satisfaction inherent in learning (Ryan & Deci, 2000; Vallerand et al., 1992; Vansteenkiste et al., 2006).

In nursing education, academic motivation plays a crucial role in students to encourage them to absorb vast amounts of information, acquire necessary skills, and engage in continuous learning to provide high-quality nursing care (Al-Osaimi & Fawaz, 2022; Saeedi & Parvizy, 2019). Nesje (2015) found that academic motivation and professional commitment among nursing students have a significant correlation. High academic motivation makes learning occupational knowledge and skills easy and internalizing occupational philosophies and values. Thereby, this positively contributes to the professional development of nurses (Taşkın Yılmaz et al., 2016). Additionally, students with elevated motivation levels experience fewer instances of academic depression and exhibit higher levels of self-assurance (Abdolrezapour et al., 2023; Berdida, 2023). Instead, the lack of academic motivation caused the students to have a negative attitude, lose interest in learning or even lead to postponement, poor academic performance, and dropout (Shakurnia et al., 2015; Wang, 2019). More than one-third of medical students, in general, and nursing students, in particular, whose academic motivation was not good enough (An et al., 2021; Tran et al., 2019). The worrying thing was that the academic motivation of nursing students tended to decrease from the first year to the fourth year (Tran et al., 2019).

Although many studies have focused on assessing the academic motivation of nursing students worldwide, to the best of our knowledge, no studies simultaneously evaluated both the quantity and the quality of academic motivation. Besides, many things could be improved in understanding the factors related to this issue. Therefore, this study aimed assured academic motivation and identify the associated factors in undergraduate Vietnamese nursing students.

2. Research Methods

2.1. Study

Design A cross-sectional study design was conducted.

2.2. Setting and Sampling

A convenience sample of nursing students (n=237) was recruited from Can Tho University of Medicine and Pharmacy, Vietnam. Data were collected between October and November 2022. The inclusion criteria were full-time undergraduate nursing students and their willingness to participate in the study. Participants who were absent during data collection were excluded. Participants have been explained the study's aims, benefits, and risks, the procedure for ensuring confidentiality, and the voluntary nature of participation. Written informed consent forms were signed immediately after they agreed to participate in this study. Subsequently, the participants were required to complete the questionnaires within 20 minutes and return them to the data collector.

2.3. Sample Characteristics

Participants responded to questions regarding demographic characteristics, including age, gender, year of the study program, and information related to whether or not they were confident in their learning ability, intended to pursue a postgraduate degree, or teach in the field of nursing, understood that study well in university is a favorable factor/condition for graduate study or being employed in your favorite job.

2.4. Assessment of Academic Motivation

The Academic Motivation Scale (AMS-C28) College version assessed nursing students' academic motivation (Vallerand et al., 1992). The original scale was developed by Vallerand in 1992. This scale has 28 items with a 7-point Likert scale across seven subscales: pleasure and satisfaction when expanding knowledge (IMK), pleasure and satisfaction from accomplishment in learning (IMA), experience stimulation in learning (IMS), experience sense of personal importance and value (EMID), the experience of pressure and guilt from the external environment (EMIN), avoiding negative consequences or achieve rewards (EME), the experience of a lack of motivation (AM). The subscales are divided into three groups of motivation, including intrinsic motivation (IMK, IMA, IMS), extrinsic motivation (EMID, EMIN, EME), and motivation (AM). The mean score of each subscale, group of motivation, or overall scale was calculated by dividing the total score of that subscale or group or the overall scale (items in the AM subscale were recorded) by the number of corresponding items. The higher the mean score on the group of motivation or overall scale, the greater the amount of academic motivation for that group or overall motivation. The original scale in English has a good Cronbach's alpha coefficient for all subscales (0.72). In this study, Cronbach's alpha coefficient for the total scale was 0.77. A generally accepted rule is that Cronbach's alpha of 0.7 - 0.8 indicates good reliability (Ursachi et al., 2015). The self-determination index (SDI) assessed the quality of academic motivation. A score of AMS was converted to SDI using the formula: $SDI = 2 \times (IMK + IMA + IMS)/3 - EMID - (EMIN + EME)/2 - 2 \times AM$ (Vallerand et al., 1992). The quality of academic motivation was classified as follows: a group of not good academic motivation included very low ($-18.00 \leq SDI \leq -10.80$), low ($-10.79 \leq SDI \leq -3.60$); medium ($-3.59 \leq SDI \leq 3.60$) and a group of good academic motivation include high ($3.61 \leq SDI \leq 10.80$); very high ($10.81 \leq SDI \leq 18.00$) (Giang & Thảo, 2020; Tran et al., 2019).

2.5. Assessment of Ability to Deal With Difficulties and Characteristics of The Learning Environment

The ability to deal with difficulties is the ability to control and solve difficulties; the ability to control the level, extent, and duration of difficulties affecting. This ability is assessed by the adversity quotient (AQ). We use The Adversity Response Profile (AQP) QuickTake version 1.0 by Stoltz. This is a 5-point bipolar scale with 20 items. The score of the overall scale is equal to the sum of the scores of the items multiplied by 2. The higher the score, the better the student's ability to deal with difficulties (Stoltz, 2001). According to the literature review and the recommendations of the research team members, we selected some characteristics to assess the characteristics of the learning environment. We used a 7-point Likert scale to record the students' assessment of the learning environment. The higher the score, the more the students appreciate that characteristic.

2.6. Data Analysis

Each completed questionnaire was given a study identification (ID). The completed questionnaire was then entered into the statistical software by the primary researcher and a research assistant independently. The data were analyzed using SPSS for Windows Version 26.0 (SPSS, Inc., Chicago, IL, USA). First, descriptive statistics were employed to summarize the collected data. The continuous variables were described using the mean and standard deviation (SD). The frequency and percentage (%) were used for the categorical variables. Next, the independent Student's t-tests and Pearson's correlation analysis were conducted to explore the association between the participants' characteristics and academic motivation. Then, to avoid the phenomenon of multicollinearity between the independent variables, which distorts the research results, a multiple regression analysis was performed to identify the predictors of academic motivation. For the regression analysis, the categorical variables were first coded as dummy variables (Pallant, 2020).

2.7. Ethical Considerations

This study conforms to the ethical principles of the Declaration of Helsinki (World Medical Association, 2013), and it was granted a research ethics committee approved by the ethical review board of the Can Tho University of Medicine and Pharmacy and the approval number 22.115.SV/PCT-HDDD.

3. Results and Discussion

3.1. Characteristics of The Participants And Participants' Assessment of The Learning Environment

Two hundred and thirty-seven nursing students were involved in filling out the questionnaire in this study. The mean age of the student was 19.68 ± 1.43 years. Most of the participants are female (81.4%). About half of the students intended to pursue a postgraduate degree (51.9%) or teach nursing (48.9%). Most nursing students understood that studying well in university is a favorable factor/condition for graduate study (94.5%) or being employed in their favorite job (92.8%) and that nurses have an important role in the care and treatment of patients (99.2%). Most students did not join a study club (78.9%) or were confident in their (71.3%) learning ability. The characteristics of the learning environment were assessed by students with a mean score of 5.27 ± 1.07 to 5.68 ± 1.05 . The characteristic with the lowest mean score was that the lecturer's lectures were easy to understand and attractive. The school's facilities were assessed with the highest mean score (Tables 1 & 2).

Table 1. The characteristics of participants and association with their academic motivation (n=237)

Characteristic	n (%)	Mean of AMS (SD)	t/r/F value
Age (Mean of age: 19.68 ± 1.43)			- 0.121 ^t
Gender	Male	44 (18.6)	5.48 (0.66)
	Female	193 (81.4)	5.43 (0.86)
Year of the study program	1 st	79 (33.3)	5.58 (0.81)
	2 rd	43(18.1)	5.35 (0.95)
	3 th	51 (21.6)	5.51 (0.87)
	4 th	64 (27.0)	5.27 (0.70)
Ability to deal with difficulties (Mean of adversity quotient: 130.66 ± 25.99)			0.277 ^{r (**)}
Learning encouragement/support from family	Yes	226 (95.4)	5.45 (0.84)
	No	11 (4.6)	5.24 (0.60)
Orientation/support in learning from family	Yes	192 (81.0)	5.44 (0.85)
	No	45 (19.0)	5.43 (0.74)
A good example of learning from family	Yes	176 (74.3)	5.47 (0.86)
	No	61 (25.7)	5.35 (0.73)
GPA of the last semester (Mean: 2.77 ± 0.47 ; N= 158)			0.246 ^{r (*)}
Cumulative gpa (mean: 2.71 ± 0.43 ; n=158)			0.273 ^{r (*)}
Join a study club	Yes	50 (21.1)	5.66 (0.73)
	No	187 (78.9)	5.38 (0.84)
Thinking that learning makes your life better	Yes	216 (91.1)	5.50 (0.82)
	No	21 (8.9)	4.85 (0.66)
Confidence in your learning ability	Yes	169 (71.3)	5.51 (0.79)
	No	68 (28.7)	5.26 (0.90)
Intending to pursue a postgraduate degree	Yes	123 (51.9)	5.57 (0.74)
	No	114 (48.1)	5.29 (0.89)
Intending to teach in the field of nursing	Yes	116 (48.9)	5.66 (0.78)
			4.174 ^{r (**)}

Characteristic		n (%)	Mean of AMS (SD)	t/r/F value
Understanding that studying well in university is a favorable factor/condition for graduate study	No	121 (51.1)	5.22 (0.82)	2.458 ^t (*)
	Yes	224 (94.5)	5.47 (0.83)	
Understanding that studying well is a factor/condition for being employed in your favorite job	No	13 (5.5)	4.90 (0.63)	2.726 ^t (*)
	Yes	220 (92.8)	5.48 (0.82)	
Nursing is your favorite profession when taking the university entrance exam	No	17 (7.2)	4.92 (0.73)	2.197 ^t (*)
	Yes	137 (57.8)	5.54 (0.86)	
Through the process of studying. You still feel loved and suitable for the nursing profession	No	100 (42.2)	5.30 (0.76)	3.640 ^t (**)
	Yes	181 (76.4)	5.54 (0.82)	
Understanding that nurses have an important role in the care and treatment of patients	No	56 (23.6)	5.10 (7.66)	1.151 ^t
	Yes	235 (99.2)	5.44 (0.83)	
	No	2 (0.8)	4.77 (0.58)	

Table 2. The assessment of the participants on the characteristics of the learning environment and association with their academic motivation (n = 237)

Characteristic		Mean of assessment point (SD)	Pearson correlation coefficient
Getting support/questions and answers in learning from lecturers/medical staff at the clinical practice site		5.61 (1.05)	0.487**
Lectures by the lecturers are easy to understand and attractive		5.27 (1.07)	0.527**
A good example is learning from lecturers/medical staff		5.33 (1.17)	0.488**
Receiving feedback/support from classmates during the study		5.57 (1.05)	0.529**
Classmates with good achievements/active learning		5.62 (1.02)	0.487**
The school's facilities (library, teaching equipment, ...) meet the learning needs		5.68 (1.05)	0.590**
The school has good policies to support/encourage students to study		5.58 (1.10)	0.580**
The training regulations of the school are appropriate		5.52 (1.02)	0.556**
The school's dissemination of learning information is very good (reward, training regulations, ...)		5.27 (1.09)	0.515**
The organization of study clubs/ its activities to meet the needs of students	About quantity	5.35 (1.15)	0.517**
	About Quality	5.25 (1.29)	0.484**

(*): $p \leq 0.05$; (**): $p < 0.001$

3.2. Academic Motivation

The mean score of the overall scale for all participants was 5.44 ± 0.83 . The motivation group with the highest mean score for all participants was extrinsic motivation (5.56 ± 0.84). The mean score of each subscale (types of motivation) for all participants ranged from 3.11 ± 1.57 (Amotivation-experience of lack of motivation) to 5.61 ± 1.07 (Pleasure and satisfaction when expanding knowledge) (Table 3). The mean SDI for all participants was 4.66 ± 4.18 . The number of students with good academic motivation was about 60.7% (Table 4).

Table 3. The quantity of academic motivation (AMS)

Characteristic	Mean (SD)	
Pleasure and satisfaction when expanding knowledge	5.61 (1.07)	
Intrinsic motivation	Pleasure and satisfaction from accomplishment in learning	5.58 (1.05)
	Experiencing stimulation in learning	5.29 (1.17)
	5.50 (1.08)	

Characteristic		Mean (SD)	
Extrinsic motivation	Experiencing a sense of personal importance and value	5.50 (0.98)	5.56 (0.84)
	Experiencing pressure and guilt from the external environment	5.60 (0.98)	
	Studying to avoid negative consequences or achieve rewards	5.57 (0.94)	
A motivation	Experiencing a lack of motivation	3.11 (1.57)	4.88 (1.56)
Overall scale		5.44(0.83)	

Table 4. The quality of academic motivation (Self-determination Index - SDI)

Quality classification of learning motivation			n (%)
Not good academic motivation	Very low (-18. ≤ SDI ≤ -10.80)	0 (0.0)	93 (39.3)
	Low (-10.79 ≤ SDI ≤ -3.60)	5 (2.1)	
	Medium (-3.59 ≤ SDI ≤ 3.60)	88 (37.2)	
Good academic motivation	High (3.61 ≤ SDI ≤ 10.80)	133 (56.1)	144 (60.7)
	Very high (10.81 ≤ SDI ≤ 18.00)	11 (4.6)	
Mean of SDI: 4.66 ± 4.18			

3.3. Association Between The Participants' Characteristics And Academic Motivation.

Table 1 shows the association between the participants' characteristics and academic motivation. There were no statistically significant associations between academic motivation and family-related factors. Among the personal factors surveyed, only participants' ability to deal with difficulties was statistically significantly associated with academic motivation ($r=0.277$, $p<0.001$). The findings indicated that the higher students' ability to deal with difficulties, the students had more academic motivation.

There were statistically significant associations between academic motivation and some learning-related factors such as cumulative GPA ($r=0.273$; $p=0.001$); GPA of the last semester ($r=0.246$, $p=0.002$); joining study club ($t=2.106$, $p=0.036$); intending to pursue a postgraduate degree ($t=2.634$, $p=0.009$) or teach in the field of nursing ($t=4.174$, $p<0.001$) and understanding that studying well in university is a favorable factor/condition for their graduate study ($t=2.458$, $p=0.015$) or being employed in their favorite job ($t=2.726$, $p=0.007$). The findings indicated that students who joined a study club, intended to pursue a postgraduate degree or teach in nursing, and understood that studying well in university is a favorable factor/condition for their graduate study or being employed in their favorite job had more academic motivation. Besides, students with higher GPAs also had more motivation to study.

There were statistically significant associations between all surveyed environmental-related factors and academic motivation. This includes knowledge transmission ($r=0.527$, $p<0.001$), support/questions answer ($r=0.487$, $p<0.001$), and setting an example of lecturers/medical staff for students in learning ($r=0.488$, $p<0.001$); classmates' suggestions/support on learning ($r=0.529$, $p<0.001$), learning dynamics and academic achievement ($r=0.487$, $p<0.001$); the school's facilities ($r=0.590$, $p<0.001$), training regulations ($r=0.556$, $p<0.001$), support/reward to encourage learning ($r=0.580$, $p<0.001$); the school's dissemination of learning-related information ($r=0.515$, $p<0.001$), quantity information ($r=0.517$, $p<0.001$) and quality information ($r=0.484$, $p<0.001$) of study clubs/its activities. The findings showed that the group of students who received good knowledge transmission, active support/question answering, and a good example from teachers/medical staff; who received feedback/support from classmates and learned with active/high-achieving classmates; who found that the school's facilities, training regulations, support/reward to encourage learning are suitable;

whom students appreciate the school's dissemination of learning-related information, quantity and quality of study clubs/its activities had more academic motivation.

The results of the multiple regression method showed that there were six predictors, namely the variables of the school's good policies to support/ encourage students to study, Getting support/questions answers in learning from lecturers/medical staff at the clinical practice site, a good example in learning from lecturers/medical staff, joining a study club, intending to teach in the field of nursing, ability to deal with difficulties. They accounted for 52.5% of the total variance ($F= 27.790$; $p<0.001$). This indicated that students with these predictors had more academic motivation (Table 5).

Table 5. The multiple linear logistic regression analysis (n = 237)

Model	B	Beta	p-value	R square	F-value	p-value
Constant	1.495		<0.001	0.525	27.790	<0.001
The training regulations of the school are appropriate	0.217	0.258	<0.001			
Getting support/questions and answers in learning from lecturers/medical staff at the clinical practice site	0.236	0.287	<0.001			
A good example is learning from lecturers/medical staff	0.105	0.155	0.031			
Joining a group/club about learning	0.323	0.145	0.016			
Intending to teach in the field of nursing	0.334	0.202	0.001			
Ability to deal with difficulties	0.004	0.140	0.024			

4. Discussion

This study showed that all participants' overall academic motivation scale score was 5.44 ± 0.83 . This score was higher than the average level of previous studies (Fatima et al., 2021; Javaeed et al., 2019; Tran et al., 2019). These results suggest that nursing students in our study had high academic motivation. There was no significant difference between the mean scores for all participants of extrinsic and intrinsic motivation in this study (5.56 ± 0.84 and 5.50 ± 1.08). Previous studies indicated that over fifty percent of students pursuing nursing selected their field of study based on external motivation to themselves rather than intrinsic motivation (Kim et al., 2016; Yun et al., 2020). Nursing students who are intrinsically motivated exhibit higher levels of satisfaction with their major, university experience, and ability to self-direct their learning compared to students who are extrinsically motivated (Kim et al., 2016). Moreover, intrinsic motivation has been found to decrease anxiety (Khalaila, 2015). Since students who choose their major based on intrinsic motivation are typically more interested in the subject matter, they tend to devote more effort and attention to learning. They also demonstrate greater flexibility in dealing with stressful situations and develop greater resilience, which enables them to overcome perceived challenges during clinical practice (Lim, 2014).

The mean score for all participants with negative motivation-motivation in the present study was higher than in previous studies (Fatima et al., 2021; Tran et al., 2019). There were still more than one-third of nursing students in the current study whose academic motivation quality was not good (Tran et al., 2019). The contribution of intrinsic and extrinsic motivation in creating overall motivation was equivalent. However, their experience of lack of motivation at some times was still more than that of nursing students in previous studies. The most worrying thing was that there were still more than one-third of the students whose motivation quality was not good (39.3). In other words, their academic motivation was easily affected and changed negatively. Thus it is necessary to increase their intrinsic motivation by strengthening the profession's reputation among them, fostering their independence and self-reliance, and paying attention to them to comprehend their circumstances.

The current research results indicated that the more the students appreciate the suitability of the school's training regulations, the higher their academic motivation. Training regulations are general regulations on the organization and management of issues in the training process, such as training programs and study duration; assessment of learning outcomes, and grading of diplomas;... Consistent with our results, other studies proved that subjects in the training program did not attract learners' interest or have a large amount of knowledge reduced learners' academic motivation (Nga & Kiệt, 2016; Nilsson & Warrén Stomberg, 2008). A tendency for academic motivation to decrease with increasing training duration was also observed (Tran et al., 2019). A busy study and clinical practice schedule reduced academic motivation (Nilsson & Warrén Stomberg, 2008; Saeedi & Parvizy, 2019). In addition, unsuitable regulations for assessing academic performance and grading diplomas can lead to the students' competence and achievements being misjudged. The pressure of grades or grading of diplomas at a high level decreases academic motivation (Nilsson & Warrén Stomberg, 2008; Oketch-Oboth & Odiemo, 2018). The above results show that the school should periodically survey students' opinions about the school's training regulations to adjust accordingly.

Our research found that the more the students appreciated the help/question answers of the lecturers/medical staff, the higher their academic motivation. Many other studies indicated that teachers who care and are willing to help the students increase the student's motivation (Hanifi et al., 2013; Rafii et al., 2019; Thao et al., 2021). Autonomy support by teachers is directly associated with students' intrinsic motivation, perceived learning outcomes, and study effort (Torbergson et al., 2023). In addition, good medical staff-student communication and lecture-student communication directly increased student motivation and vice versa (Hanifi et al., 2013). However, some studies also showed that most students had a negative assessment of nurses in clinical practice sites, which was why their motivation was lower (Thao et al., 2021). Most students said nurses had a poor attitude toward them, and it was difficult for them to communicate well with nurses (Saeedi & Parvizy, 2019). This restricted the students from expressing their difficulties and questions during clinical practice or learning to seek support and answers from nurses. The above indicated that lecturers/medical staff must be properly aware of their role and impact by supporting and answering questions during students' learning process. In addition, creating a friendly and close relationship with students is important to encourage them to express their difficulties or problems.

Research results showed that the more the students appreciate the examples of lecturers or medical staff, the more their academic motivation. Many studies showed that medical students often see lectures and medical staff as role models (Hanifi et al., 2013; Rafii et al., 2019; Saeedi & Parvizy, 2019). Core values, attitudes, and behaviors of students tend to be influenced by the role models of the lectures and the clinical staff with whom students come in contact (Hanifi et al., 2013). The lecturer/nurse's level of knowledge and ability to make patient care decisions indicates their competence and professionalism. This gave students an ideal target for their academic efforts to achieve the same (Hanifi et al., 2013; Rafii et al., 2019). Therefore, lecturers and medical staff must try to become good role models for the students regarding professional competence, ethics, working style, and communication with people.

This study showed that students participating in study clubs had more learning motivation. A study on business students found that study clubs positively affected students' motivation and achievement in the field that the club is in charge of. According to (Thao et al., 2021), 91.9% of students joined study clubs to develop themselves. Study clubs are a great opportunity for medical students to improve their skills and expertise and expand and update their knowledge. Although our study found that nursing students appreciated the quality and quantity of study clubs/its activities, 78.9% of students did not join any club. Nguyen's study also recorded similar results (Thao et al., 2021). This problem may stem from a lack of clubs regarding interest in nursing students or limited time due to busy academic and clinical practice schedules. From there, it showed that in addition to developing the quantity and quality of study

clubs/its activities, the school should also consider the type of clubs that students need to join or the reasons for preventing their participation.

This study showed that the students who intend to teach in the nursing field had higher academic motivation than those who do not intend to. Karabulut's research also had similar results (Karabulut et al., 2021). The Vietnamese Ministry of Education has stipulated that a lecturer must have high professional qualifications, solid professional capacity, good scientific research ability, and the ability to develop social relationships (Ministry of Education and Training, 2020). Therefore, the students who intend to teach in the nursing field in this study could learn about the factors/conditions of becoming a lecturer. They understood that they must study and train themselves to achieve the competency standards of a lecturer. Besides, students identified clear learning goals that positively impacted their academic motivation (Rafii et al., 2019; Wang, 2019). In Nilsson's research, students who were assessed as highly academically motivated said that good job opportunities in the future were an important reason for them to study hard (Nilsson & Warrén Stomberg, 2008). The above results indicated that educators must introduce the students to a good job (such as nursing lecturer, nursing researcher, etc.) and help them define their learning goals to stimulate them to study hard.

We found that the students with a higher ability to deal with difficulties had a high academic motivation. The previous study shows similar results (Abdolrezapour et al., 2023). The ability to be resilient is highly beneficial for teenagers as they confront the pressures and obligations of maturity, particularly in the face of unfavorable situations (Phillips et al., 2019; Schönfeld et al., 2017). Due to the nature of the nursing curriculum and profession, nursing students typically experience higher stress levels and workload than other students (Black Thomas, 2022; Hwang & Kim, 2022; Lavoie-Tremblay et al., 2022; Olabisi et al., 2022). The results of previous systematic reviews and meta-analyses found the prevalence of stress and depression among nursing students reaching 61.97% and 34%, respectively (Tung et al., 2018; Zheng et al., 2022), and female students were at a two-times higher risk of experiencing stress than men (A. Anaman-Torgbor et al., 2021). Academic concerns, clinical concerns, personal issues, and worry about interacting with other nursing students are the four main factors that can stress nursing students (Alghamdi et al., 2019; Nebhinani et al., 2020).

In the field of nursing education, recent research has emphasized the significance of resilience as a beneficial factor that can aid nursing students in coping with challenges. Specifically, studies have shown that resilience can help nursing students overcome difficulties such as negative effects on their quality of life, heightened levels of academic exhaustion, and psychological strain (Berdida, 2023; Berdida & Grande, 2023; Cuartero & Tur, 2021; Dje, 2023; Guillasper et al., 2021; Sweeney, 2021). There have been many investigations into the idea that resilience may be a factor in the development of personal growth as a result of unfavorable experiences and stressful and tough conditions during one's academic journey (Alkaissi et al., 2023; Amsrud et al., 2019; Mcdermott et al., 2020; Yun et al., 2020).

Research's Oketch and Karabulut proved that stress at low and moderate levels promoted students' academic motivation to overcome difficulties that cause them stress. However, when this pressure is too great, academic motivation decreases even if students are delayed or drop out of school (Karabulut et al., 2021; Oketch-Oboth & Odiemo, 2018). When researching the causes of low academic motivation, Nilsson found that having difficulty, overload in the study, or achievement pressure was the decline in students' academic motivation. On the contrary, some students still felt excited or saw this as a stimulus to help them study better (Nilsson & Warrén Stomberg, 2008). Nilsson's results may be due to the difference in the ability to deal with the difficulties of the two groups of students. Indeed, the ability to deal with difficulties was shown to limit stress. By dealing well with difficulties, students can proactively deal with adverse events and turn obstacles into opportunities (Somaratne et al., 2017).

This study has several limitations; First, the information was self-reported. Therefore, recall and supporting bias could have occurred during the data collection. To minimize bias, objective

measurements should be conducted. Second, the association findings from this study may not be causal owing to the study's cross-sectional design. A longitudinal design should be conducted to clarify the causality between academic motivation and its associated factors. Finally, the findings of this study have limited generalizability because the sample included nursing students from only one university using the convenient sampling method. Therefore, further studies using nationwide systematic sampling and international comparisons are highly recommended.

5. Conclusion

Nursing students had many academic motivations. However, the quality of their academic motivation was not high. Students still had many lacks of academic motivation. The suitable training regulations, good help/question answers of the lecturers/medical staff, good examples of lecturers/medical staff, participation in study clubs, intending to teach in the nursing field, and good ability to deal with difficulties were positive predictors of academic motivation. Therefore, the school should periodically survey students' opinions on the training regulations and consider adjusting accordingly. The teachers and medical staff should actively support, answer questions in learning, and set a good example for students about academic efforts. In addition to improving the quality and quantity of study clubs or their activity, the school should investigate the type of study clubs students need and the reasons for preventing them from joining them. Nursing educators must introduce students to good job opportunities and help them define their academic goals to realize their career intentions. Student counseling rooms and seminars on how to deal with academic difficulties and stress should be set up.

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Conflicts of Interest

The authors declare no conflicts of interest

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