

KNOWLEDGE OF UNDERGRADUATE NURSING STUDENTS TOWARDS CREDIT-MODULE SYSTEM: A STUDY IN CAN THO

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ABSTRACT

Background: *The Credit-Module System offers numerous benefits for universities worldwide based on the convenience of the educational program. It allows students to create their curriculum individually and to be the center of studying activities. Learning and teaching with the credit-module system stimulate the effective work and comprehensive capacities of teachers and students and enhance students' independent learning in the educational process. Therefore, students' knowledge and perception of this model of educational process effectively increase the quality of education and students' accordance with the requirements of labor markets. Objectives:* *This present study aimed to examine undergraduate nursing students' knowledge at Can Tho University of Medicine and Pharmacy regarding the credit-module system and identify some factors related to students' knowledge. Materials and methods:* *140 undergraduate nursing students were selected as study respondents in a cross-sectional descriptive correlational study. Students' knowledge of the credit-module system was examined using a self-structured questionnaire with 25 items. A higher score indicates better knowledge. Results:* *The study findings presented a low level of knowledge of the credit-module system among nursing students, with a mean score of 17.4±4.8. Half of the respondents had poor knowledge. Among the subscales, nursing students had the highest score in the subscale of the learning method of the credit-module system. The knowledge of student's roles in learning based on the credit-module system was the lowest. There was a significant correlation between years of education and knowledge of nursing students. Meanwhile, gender and level of GPA were not associated with students' knowledge of the credit-module system. Conclusions:* *among nursing students, poor knowledge of the credit-module system was shown. The study findings were consistent with previous literature. The student respondents emphasized the importance of professional introduction and support in improving their practices with the credit system in education to gain a higher quality of education.*

Keywords: *Knowledge, Credit-Module System, Nursing Education, Nursing Students.*

I. INTRODUCTION

Education is a process to improve students' knowledge, skills, and abilities. It plays a pivotal role in the process of national development. In recent years, the educational system has been moving to a credit-module education system, showing many positive results worldwide. The credit-module system is an assessment model based on a set of module technologies and a credit measure. This is a modern and flexible educational system [1]. It enables students to create their own learning plans individually and evaluate their work and effort during their learning process. In addition, the credit-module system introduces a new approach to education, effectively achieving essential and in-depth theoretical knowledge based on social demands [2]. Therefore, this educational system enhances students' independent work, teamwork skills, professional development, and maturity.

These factors could increase the quality of education and students' competitiveness in accordance with the requirements of the domestic and international labor markets [3].

In Vietnam, the credit-module system is encouraged by the Ministry of Education and Training and is applied in many universities nationwide. However, there are many barriers in the transition to a credit-modular education system, including principles and policies of the organization of the educational process, control over students' knowledge, professional competence of teachers, effective instructional materials, and student initiatives [4]. Among those barriers, the most important one regarding the effectiveness of the applied credit-module system in Vietnam is the perception and knowledge of this new form of the educational curriculum. Previous studies indicated that knowledge relating to the credit-module education system among students, especially nursing students, was poor [5], [6]. The low knowledge might lead to low practice during the learning process, which would decrease the quality of education. Therefore, it is essential to investigate and examine nursing students' knowledge regarding the credit-module system to develop appropriate strategies to enhance the quality of nursing education.

II. METHODS

2.1. Study population and setting

184 nursing students at Can Tho University of Medicine and Pharmacy were invited to be study respondents. However, there were 140 responses. The response rate was 76.1%.

2.2. Study design

A cross-sectional descriptive design has been used in the present study to examine knowledge of the credit-module system and its associated factors.

2.3. Study instruments

(1) Demographic Questionnaire: students' demographic data was collected by using a questionnaire including the information of age, gender, year of university education, and grades;

(2) Students' knowledge of the credit-module system was examined by using a 25 item-self-reported questionnaire. Among them, 10 items asked about the definition and advantages, 11 about learning activities, and 4 about students' roles in the credit-module educational system. Each item had 3 choices: true, not sure, and false. The correct answer was scored by 1. Incorrect or "not sure" response was scored by 0. The sum of each item score calculated the total score. It ranged from 0 to 25. It was also categorized as good knowledge (19-25 scores) and poor knowledge (0-18 scores) [4].

The questionnaire was tested for internal consistency reliability with 30 nursing students who had similar characteristics to the sample of this study. The reliability was 0.81.

2.4. Data Collection

We conducted an entire sample, including 140 nursing students who experienced at least one semester with the credit-module system and consented to participate in the study. The data gathering was from October to December 2022.

2.5. Statistical Analysis

Data were collected, encoded, and inputted by using SPSS 26.0. Descriptive statistics was used to examine demographic characteristics and knowledge of the credit-module system. The chi-square test was used to determine the relationships between variables. This study's p-value of 0.05 or less is considered statistically significant.

2.6. Ethics Approval

This study was approved by The Ethical Review Board of Can Tho University of Medicine and Pharmacy (Ethical Approval No: 22.114.SV/PCT-HĐĐĐ, May 10, 2022).

III. RESULTS

3.1. Demographic characteristics among study respondents

The mean age among nursing students was 19.4 ± 0.8 . Most nursing students were female (70.7%). 81.7% of study respondents had a good Grade Point Average (GPA) (47.9%). The level of GPA among nursing students is shown in Figure 1.

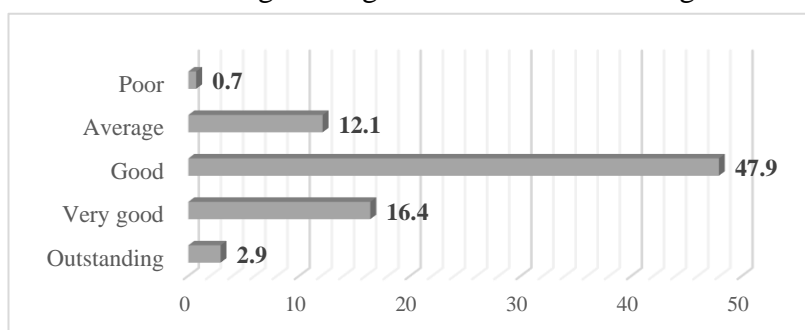


Figure 1. Classification of attitude towards CMS among students

A half of nursing student respondents had good level of GPA. Only 2.9% of students had outstanding level and 0.7% had poor level

3.2. Knowledge of the credit-module system among undergraduate nursing students

Table 1. Knowledge of the credit-module system among nursing students

	Mean	S.D.	Range	Good knowledge	Poor knowledge
Knowledge of credit-module system	17.4	4.8	0-25	50%	50%

Nursing students had a low mean score of knowledge regarding the credit-module system.

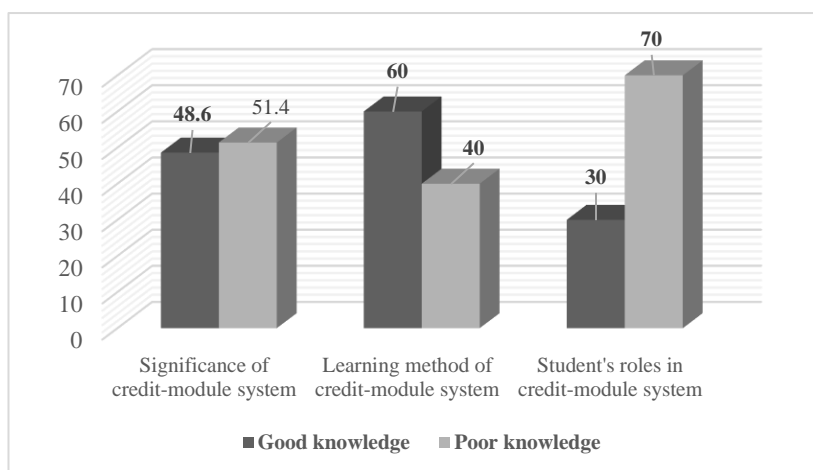


Figure 2. Knowledge regarding the credit-module system among nursing students

Good knowledge regarding the learning method of the credit-module system was presented among nursing student respondents; meanwhile, poor knowledge of the student's role was shown.

3.3. Factors related to knowledge of the credit-module system among nursing students

Table 2. Relationships between gender, level of GPA and knowledge of the credit-module system among nursing students

Factors		Knowledge of the credit-module system		Total	P χ^2 /Fisher's
		Poor	Good		
Gender	Male	24 (58.5%)	17 (41.5%)	41	0.2
	Female	46 (46.5%)	53 (53.5%)	99	
Level of GPA	Outstanding	2 (50%)	2 (50%)	4	0.83
	Very good	12 (52.2%)	11 (47.8%)	23	
	Good	36 (53.7%)	31 (46.3%)	67	
	Average	20 (44.4%)	25 (55.6%)	45	
	Poor	0 (0.0%)	1 (100%)	1	

There was no statistically significant association between gender and level of GPA knowledge of the credit-module system.

Table 3. Relationships between the year of education and knowledge of the credit-module system among nursing students

Factors		Knowledge of credit-module system		Total	P χ^2
		Poor	Good		
Year of education	2 nd year	28 (38.9%)	44 (61.1%)	72	0.002
	3 rd year	20 (80%)	5 (20%)	25	
	4 th year	22 (51.2%)	21 (48.8%)	43	

There was a significant association between the year of education and knowledge of the credit-module system ($p = 0.02$, $\chi^2 = 12.8$).

IV. DISCUSSIONS

4.1. Knowledge of the credit-module system among undergraduate nursing students

The credit-module system provides many advantages for students, educational institutions, and society. This system's goal is to develop human capital capable of satisfying the labor market and modern needs and ensuring one's self-study competence. The study findings indicated poor knowledge among undergraduate nursing students about the credit-module system. Related literature also supported our findings. Numerous studies found that undergraduate students showed a low level of knowledge about definition, significance, advantages, disadvantages, study activities and methods, and teachers' and

students' roles in applying this system in education. A study conducted by undergraduate students in Uzbekistan showed low knowledge of the credit-module system. This study found that using a credit-module system was useful in increasing the quality of education; however, students' perception was not good. There was a lack of understanding about the importance of learning and teaching activities, assessing and evaluating the credit-module system compared with traditional education [2]. Similarly, the study conducted in India to find out the knowledge and attitude of 432 undergraduate students towards the credit-module system in relation to their academic achievements revealed that students had a low level of knowledge but a positive attitude toward this system [7]. The same findings were shown by a study conducted on 50 undergraduate teachers and 150 undergraduate students at Basanti Devi College in India [8].

Assessment of learning outcomes is one of the important didactic stages of the learning process and significantly impacts improving the effectiveness and quality of learning. However, previous studies presented that most undergraduate students had low and moderate knowledge of evaluating the credit-module system. In Vietnam, a study examining knowledge, attitude, and practice concerning the credit-module system among 65 students at Hai Phong University presented a limitation of students' knowledge and perception of the credit-module system [4].

When considering each subscale of the knowledge, knowledge regarding the learning method of the credit-module system had the highest score; meanwhile, knowledge of the student's role in education with the credit-module system was the lowest one. These findings supported previous studies, revealing low or moderate knowledge of the credit-module system among undergraduate students, especially knowledge regarding advantages and students' roles. According to Tran, half of the student respondents had a limited understanding of their roles in studying with credit-module system [4]. A study conducted on 60 graduate-level credit system students in India consistently revealed a significantly positive relationship between students' knowledge and attitude. The study also presented a low incidence of good knowledge and positive attitudes among participants. In other words, students had poor knowledge, which resulted in a negative attitude towards education based on the credit system. Besides, students' knowledge and attitude regarding study methods also had the highest score [9].

4.2. Relationships between gender, level of GPA, year of education and knowledge of the credit-module system among undergraduate nursing students

Our study found that gender and level of GPA were not significantly associated with knowledge concerning the credit-module system among undergraduate nursing students, while year of education related to students' knowledge. Our study was consistent with the related literature.

A study conducted on 44 second-year students at Tashkent University of Information Technologies, Uzbekistan, to examine their knowledge and perception towards education based on the credit system demonstrated students' lack of knowledge of this educational model. Besides, some factors significantly affected their knowledge and perception, including gender, age, year of education, and self-efficacy [6].

In our study, gender and GPA were not associated with students' knowledge. However, a correlation was shown in a study of Tran (2020). The difference between the study sample

and the setting might explain this difference. The study of Tran obtained a smaller sample size with quite the same number of male and female participants [4].

The significant relationship between years of education and knowledge of the credit-module system was supported by previous studies. Consistent results were also found by Ismoilovna and Oripovna in 2020. This study indicated that a credit-module system fully responded to the requirements of society for the quality of education, and the use of a credit-module system allowed to significantly increase students' academic success. Moreover, student's experience and years of education had a negative association with their knowledge of this system [10].

Based on open-ended questions, our study found that the student respondents supposed a significance of teacher's and senior students' support in enhancing their knowledge regarding education with a credit-module system. Therefore, general introduction and support should be encouraged to increase knowledge of this system among nursing students, which leads to a higher quality of nursing education.

V. CONCLUSIONS

Undergraduate nursing students had poor knowledge of the credit-module system. A significant correlation between knowledge and years of education was revealed. This study's findings suggest that introduction, discussion, and support from professors and senior students are suggested for students to practice well with the credit-module system and gain academic success.

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