EVIDENCE – BASED PRACTICE: ATTITUDES AND KNOWLEDGE AMONG UNDERGRADUATE NURSING AND MIDWIFERY STUDENTS AT CAN THO UNIVERSITY OF MEDICINE AND PHARMACY IN 2023 AND RELATED FACTORS

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ABSTRACT

Background: *Evidence-based practice (EBP) is imperative for ensuring patient safety and enhancing the quality of education. In 2022, EBP was considered one of the compulsory standards for nursing and midwifery in Vietnam. The recognition of the attitude and knowledge in EBP is an essential step before applying evidence in clinical practice and teaching.* ***Objectives:*** *This study aimed to (1) describe the attitude and knowledge in EBP, and (2) identify the related factors which are associated with EBP attitude and knowledge.* ***Materials and methods:*** *A convenience sample with the cross – sectional descriptive design was conducted on 178 nursing and midwifery students (2^{nd} - 4^{rd} academic year) at the Faculty of Nursing and Medical Technology, Can Tho University of Medicine and Pharmacy from September to October - 2023. The subscale from the Evidence-based Practice Competence Questionnaire consisted of attitude and knowledge, developed by Ruzafa-Martinez in 2013 was used for this study. The Evidence-Based Competency Questionnaire is one of the most valid tools used in various studies by Ruzafa-Martinez. All questions were translated and reliability was measured. The reliability of the subscale (knowledge and attitude) was evaluated using Cronbach's alpha and internal consistency accounted for 0.88 and consisting of 8 and 9 questions, respectively.* ***Results:*** *Most of the nursing and midwifery students had a high attitude and knowledge in EBP. Genders, academic year, majors were identified as significant related factors for knowledge about applying evidence.* ***Conclusions****: Nursing and midwifery students at Can Tho University of Medicine and Pharmacy had a high level of skills and knowledge in EBP. Training institutions need to organize many classes and activities for EBP, and innovate teaching methods to train human resources to meet professional standards.*

Keywords*: evidence-based practice; attitude and knowledge towards EBP; nursing students; midwifery students.*

I. INTRODUCTION

Evidence – Based Practice (EBP) is defined as the conscientious, explicit and judicious use of current best evidence in making decisions about the care of the individual patient [1]. In 2022, the Ministry of Health in Vietnam published the basic standards for Vietnamese nurses and midwifery, one of the standards is science research and applying evidence in clinical practice competency [2], [3]. Up to now, in Vietnam there have been many studies on attitudes and knowledge in EBP which was carried out among nurses, most nurses have shown intermediate knowledge and attitudes [4]. However, these studies were conducted on nurses with clinical experience, very few studies evaluated nursing and midwifery students. EBP is considered as the foundation for undergraduate and graduate nursing education, as well as a way to help the nursing profession reduce the gap between theory and practice [5]. In particular, to enhance the quality of patient care in the future,

students also need to be aware of the importance of EBP while in the classroom. Therefore, in order to improve the quality of education, we conducted this study to measure the attitudes and knowledge towards EBP and identify the related factors associated with them.

II. MATERIALS AND METHODS

2.1. Study population: undergraduate nursing and midwifery students at the Faculty of Nursing and Medical Technology, Can Tho University of Medicine and Pharmacy from September to October, 2023.

Inclusion criteria: undergraduate nursing students were learning 2nd - 4th year.

Exclusion criteria: undergraduate nursing and midwifery students who did not agree to participate in this research, were absent during the research period.

2.2. Methods

Research design: cross-sectional descriptive study.

Sampling size: Our research was conducted on 178 undergraduate nursing and midwifery students with a significance level of 5%, a standard deviation (SD) (σ) of 0.81 and an absolute error (d) of 0.15 [5].

$$n \geqslant (\frac{Z_{1-\alpha/2}\sigma}{d})^2$$

Sampling technique: convenience sampling methods.

Data collection tool: the outcome variables were attitude and knowledge towards EBP – one of the subcales from the Evidence-based Practice Competence Questionnaire (EBP-COQ) among students developed by Ruzafa-Martinez in 2013 [6]. The validity of the given questionnaire was followed to the guidance of Beaton [7]. The EBP-COQ consists of 25 items with 5 point- Likert Scale (1=strongly disagree to 5=strongly agree). The lowest level corresponds to 1 point, and the highest level corresponds to 5 points. In particular, the questionnaire has 9 items that need to be reverse coded with 1 "strongly disagree" changing to 5 "strongly agree"; 4 “disagree” changing to 2 “agree”; 3 “no idea” unchanged; 2 “disagree” changing to 4 “agree” and 1 “strongly disagree” chang became 5 “strongly agree”. The reliability of the questionnaire was confirmed by the Cronbach’s alpha coefficient. The Cronbach’s alpha coefficient for all scale was 0.83.

Data collection procedure: Students who agreed to participate in the study were asked to complete the demographic data and outcome variables.

Data analysis: STATA software version 14.2 was used to analyze the data. Descriptive statistics were used to describe the characteristics of participants: qualitative variables (frequency, percentage), quantitative variables (mean, SD). Pearson correlation, independent t-test, and ANOVA analysis were used to test the correlation between participants’characteristics and skills and knowledge in EBP. Using the p-value <0.05 is considered statistically significant.

Ethics approval: The Institutional Review Board at Can Tho University of Medicine and Pharmacy sanctioned the ethical approval for this study (Approval No. 23.016.GV/PCT-HĐĐĐ, dated May 12, 2023). Written informed consent was obtained from all students who agreed to participate in the study. The students, whose participation was completely voluntary, received both oral and written information about the purpose, content, and extent of the study, and were assured that their responses were confidential.

III. RESULTS

Table 1. General characteristics of participants

Characteristics	Frequency (n)	Percentage (%)
Age (Mean ± SD)	20.79 ±2.17	
Genders		
Male	20	11.24
Female	158	88.76
Academic years		
2nd year	56	31.46
3rd year	86	48.31
4th year	36	20.22
Majors		
Midwifery	73	41.01
Nursing	105	58.99
Ranked academi		
Excellent	3	1.69
Very good	20	11.24
Good	115	64.61
Average	40	22.47
Reading skills in English		
Poor	46	25.84
Average	107	60.11
Good or above	25	14.04
Joined the statistic course		
Undergone	129	72.47
Not undergone	49	27.53

The average age was 20.79 ±2.17. The majority of the participants were females, accounting for 88.76%. Most of the study participants were 3rd year students, accounting for 48.31%. Regarding the ranking of academic performance according to the cumulative average score up to the time of the study, students with good level accounted for 64.61%, 22.47% with average academic performance, excellent and very good level was 1.69% and 11.24%, respectively. The study participants almost had an average level when reading and understanding English documents (60.11%) and had undergone data analysis classes (72.47%).

Table 2. Attitudes and knowledge towards EBP

No.	Contents	Mean ± SD
1	Knowledge about EBP	3.02 ± 0.70
2	Attitude towards EBP	3.89 ± 0.51

Participants had average knowledge and positive attitudes towards EBP with a score of 3.02 ± 0.70 and 3.89 ± 0.51, respectively.

Table 3. Factors associated with Attitude and Knowledge towards EBP

		Knowledge		Attitude	
		Mean ± SD	p	Mean ± SD	p
Age (*)		r=0.12	0.14	r=0.13	0.11
Genders	Male	2.63±0.76	0.02	3.74±0.58	0.06
	Female	3.04±0.65		3.95±0.38	
Academic year	2nd year	3.18±0.63	0.01	3.85±0.34	0.09
	3rd year	2.87±0.67		3.97±0.45	

		Knowledge		Attitude	
		Mean ± SD	p	Mean ± SD	p
Majors	Midwifery	3.18±0.69	0.00	3.94±0.35	0.80
	Nursing	2.86±0.63		3.92±0.45	
Ranked academic	Excellent	2.91±0.14	0.22	3.25±0.46	0.54
	Very good	2.81±0.77		3.40±0.26	
	Good	3.02±0.71		3.49±0.29	
	Average	2.98±0.47		3.36±0.30	
Reading skills in English	Poor	2.75±0.72	0.59	3.81±0.47	0.23
	Average	3.09±0.63		3.95±0.37	
	Good or above	3.05±0.69		4.03±0.41	
Joined the statistic course	Undergone	2.97±0.65	0.60	3.91±0.40	0.40
	Not undergone	3.07±0.80		4.00±0.46	

(*): Pearson correlation

Statistically significant differences were found between knowledge with genders, academic year, majors ($p<0.05$).

IV. DISCUSSION

Until now, in Vietnam there are few studies reported on the knowledge and attitude in EBP among undergraduate nursing students. The results from our study have performed that the proportion of females was higher than males which the majority of participants with good academic and nursing students standing attend the survey. In addition, in this study the participants had an average level of reading skills in English and had joined the statistic program in the previous. Our study similar to the Duong Thi Ngoc Bich's study showing that most of undergraduate nursing students were female and had a average level in English [5]. At the same time, also in the study of Duong Thi Ngoc Bich, the majority of students participated in the study were 4th year students, in our study, mainly 3rd year students due to the time of the study, the 4th year nursing students had graduated, we could not reach this group of students. According to Cristina Lavareda Baixinho's study (2022), a survey should be carry out on the students from 2nd year before they begin the internship (clinical practice and teaching) [8]. Especially, we conducted on both nursing and midwifery students, this assessment helps us to re-evaluate the entire teaching method currently in the nursing faculty, thereby providing a basis for proposing innovative teaching methods more effective.

Reagarding the attitude and knowledge towards EBP, our research showed that the undergraduate nursing students have a high level. The results of this study was lower than those of Duong Thi Ngoc Bich) whole fields [5]. The average score of attitude scale was 3.89 (± 0.51), indicating that students' attitudes about EBP were quite good, students thought that EBP should be applied in clinical practice, and also showed that understanding the importance of EBP helps increase EBP implementation and beliefs in the learning process [9]. Knowledge scale was 3.02 (± 0.70) performed that study participants was lack of the knowledge about the level of evidence based on main research design on each study and relevant subjects to EBP. According to Bernadette Mazurek Melnyk, critically appraise the evidence is the essential skill to enhance the EBP competency and maitain EBP implementation on the clinical practice environment [10].

In this study, we found a significant statistically differences between knowledge in EBP with genders, majors, academic year ($p<0.05$). Midwifery students have knowledge

about EBP higher than nursing students, this difference can be explained by the fact that now specialized courses for midwifery students are being conducted based on evidence-based teaching methods in practice hospitals. Therefore, it is necessary to innovate teaching methods on all students. In this study, female partiticpants had the high scores in knowledge, this difference was explained by the majority of female in the nursing profession [11]. In addition, 2nd year participants had higher knowledge scores about EBP. This is because students have a desire to improve their academic performance [11]. Although we did not record a relationship between attitudes and characteristics of the research subjects, adequate knowledge and skills will be associated with a positive attitude. Theoretical knowledge alone is not enough to form a positive attitude. In our study, students had positive attitudes about EBP but had poor knowledge, which demonstrated that students were willing to be taught about EBP.

V. CONCLUSION

This research shows that students have a high attittude and knowledge towards EBP. Based on the study results, training institutions need to organize many classes and activities for nursing students in general and medical students in particular, and innovating teaching methods to train human resources to meet professional standards nowadays.

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