

## Employing evidence-based nursing practice in the clinical setting: A learners' perspective



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### ABSTRACT

The nursing faculty must prepare students to meet challenges through the provision of adequate and evidence-based services amid complexities in the healthcare system. This study aims to determine the differences in demographic characteristics of the nursing students that may factor in the application of evidence-based practice. The researcher employed a quantitative comparative approach. There were 213 nursing students from the College of Nursing, the University of Hail, who served as respondents in this study. Simple random sampling was used as the sampling technique. This study used the Student Evidence-based Practice Questionnaire (S-EBPQ) for data-collection. Data were treated with the T-test to determine the difference between sex and the use of the evidence-based practice. The age and year level was tested using a one-way analysis of variance (ANOVA) tests. This study was carried out in December 2019 through February 2, 2020. There was no significant difference between the use of evidence-based practice for males ( $M=4.61$ ,  $SD=0.90$ ) while the female ( $M=4.48$ ,  $SD=1.03$ ) with  $t(211)=0.96$ . Meanwhile, there is a significant difference between age and the use of EBP by one-way ANOVA ( $F(2,210)=9.48$ ,  $p<0.001$ ), and year level and the use of EBP by one-way ANOVA ( $F(3,209)=155.24$ ,  $p<0.001$ ), with a partial effect size of 0.69. Demographic information of the student nurses such as sex is not significant to implementing EBP, but age and year level has been found to be determinants in implementing the EBP. Findings contribute to the development of the improvement of the program curriculum to reinforce the involvement of students in learning and practicing the evidence-based process.

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### 1. Introduction

The American Association of Colleges of Nursing posits that the curricula must capacitate future nurses to apply current findings and evidence-based practice (EBP) (AACN, 2011). However, approaches to this are unclear (Chang and Levin, 2014), and this leads to a gap between theory and practice. As such, the nursing faculty must prepare the students to meet these challenges through the provision of learner-centered (Albaqawi et al., 2018), adequate and evidence-based services amid complexities in the healthcare system. In doing so, faculty members are challenged to use evidence-based practices in their teaching activities, both in the clinical and

classroom setting. In that sense, they are to guide how students carry out evidence-based practice at their level. As expected, the learners are prepared and encouraged to adapt to the process quickly. According to Stevens (2013), if students are employing EBP in their formal education, they are expected to be enthused about using the EBP in the contemporary clinical setting. According to Bloom et al. (2013), the assumption is that when the EBP process is developed in the formation stage, it advances the interest and skills of the students.

Evidence-based practice in the learners' level has been explored by some scholars (Fineout-Overholt et al., 2011; Fiset et al., 2017; Phillips and Cullen, 2014) and most focused on teaching strategies (Crookes et al., 2013; Florin et al., 2012; Irvine et al., 2008). While the literature has emerged in consideration of the particular concepts and methods to integrate EBP into teaching in practice (Moch and Cronje, 2010; Foss et al., 2014; Morris and Maynard, 2009), there is still a dearth in the assessment of the students' use of EBP. According to Chang and Levin

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(2014), it is still unclear which approach is most effective in developing students' knowledge, attitudes, and practice of EBP. Although previous studies demonstrate that there is a link between EBP and the knowledge, attitudes, and academic preparation of the students, there are still uncertainties on how nursing students advance their skills and practice the concept. Further, Chang and Levin (2014) asserted that the relationship between the development of students' knowledge and attitudes, and the practice of EBP is not clear. This suggests that the responsibility of finding the best teaching approach to prepare the students to practice EBP rests on the faculty members.

Significantly, this study is vital for both the nursing faculty and the students alike. It is essential for faculty members not only to focus on capacitating the learners to practice EBP but also to support its implementation in the process in the clinical environment. Moreover, assessing the use of EBP within the student's level will help the educators identify what educational changes are required to meet the outcomes. It is paramount, therefore, that assessment must be conducted to determine what approaches are lacking in the implementation of the correct process.

This study aims to determine the differences in demographic characteristics of the nursing students, which may factor in the application of evidence-based practice. Assessment of the differences in the demographic characteristics can be important parameters to include in the design approach to ensure that the student nurses apply EBP in the clinical environment.

## 2. Methods

### 2.1. Design

The researcher employed a quantitative comparative approach to determine the differences in demographic characteristics of the nursing students in EBP application.

### 2.2. Participants

The sample comprised the 213 nursing students who have been in the clinical setting and presently have their theoretical courses. A simple random sampling method was used. The sample size was determined using a sample size calculator online with 95% confidence. From the 478 potential participants, a sample size of 215 respondents was identified. However, 213 questionnaires were received with a 99% response rate.

### 2.3. Data collection

The researcher used a survey questionnaire to collect the data. The instrument included an informed consent form explaining the study, study procedure, purpose, risk and benefits, and voluntary

participation. The researcher's contact information was included to enable the participants to contact the researchers if clarifications were needed. The data were collected from December 2019 through February 2, 2020.

### 2.4. Questionnaires

The Student Evidence-based Practice Questionnaire (S-EBPQ) developed by Upton and Upton (2006) was used, with the developers' permission. The researcher modified the original seven-point Likert scale used in the original study. The student nurses were asked to answer on a seven-point scale where 1=strongly disagree, 2=disagree, 3=slightly disagree, 4=neutral, 5=slightly agree, 6=agree, and 7=strongly agree. To contextualize the S-EBPQ in the locality, the researcher subjected the questionnaire to validity and reliability. There were four panels of experts who served as validators. Two of them hold experience in the clinical area with quality and EBP expertise, one of them holds a doctoral degree in nursing education while the other has a doctoral degree in psychometrics. These four validators returned unanimous validation, indicating that the questionnaire is highly valid. Thereafter, the researcher conducted a reliability test on 15 nursing students who were not participants in the actual study. Cronbach's alpha coefficient for 21 items .93, which means the S-EBPQ instruments were highly reliable.

### 2.5. Ethical consideration

This study has obtained ethical approval from the University of Hail. Written consent was obtained from the respondents when they completed the questionnaires.

### 2.6. Data analysis

SPSS Version 21 was used to analyze the data. The frequency and percentage were used to determine the demographic characteristics of the nursing students. A t-test was used to determine the difference between sex and the use of the evidence-based practice. The age and year level was tested using a one-way analysis of variance (ANOVA) tests. Statistical significance was set at  $p < 0.05$ .

## 3. Results

Of the 213 nursing students, the majority (53.05) were female-most (54.93) of them aged 20-25 years of age, followed by 26-30 (24.88). The nursing students who participated in this study belonged to year level 1 (33.33), followed by year level 4 (28.64) [Table 1](#).

A t-test revealed that there was no significant difference in the use of evidence-based practice with a mean score (SD) for males ( $M=4.61$ ,  $SD=0.90$ ) and

a mean score of ( $M=4.48$ ,  $SD=1.03$ ) with  $t(211)=0.96$  for females.

**Table 1:** Demographic characteristics of the participants, N=213

	Variables	Frequency	Percentage
Sex	Male	100	46.95
	Female	113	53.05
Age	20-25 years old	117	54.93
	26- 30 years old	53	24.88
	31 years old and above	43	20.19
	2	71	33.33
Level	3	29	13.62
	4	52	24.41
	5(Interns)	61	28.64

Meanwhile, there is a significant difference between age and the use of EBP by one-way ANOVA ( $F(2, 210)=9.48$ ,  $p<0.001$ ).

Further, there is a significant variance in the difference between year level and use of EBP by one-way ANOVA ( $F(3, 209)=155.24$ ,  $p<0.001$ ), with a partial effect size of 0.69 (Table 2).

#### 4. Discussion

This study aimed to determine the differences in demographic characteristics of the nursing students

**Table 2:** Differences between EBP implementation across the respondents' profile N=213

	Variables	Mean	SD	Test Value	df	p-value
Sex	Male	4.61	0.90	(t) -0.96	211	0.339
	Female	4.48	1.03			
Age	20-25 years old	4.42	1.02	(F) 9.48	SSb=2 SSw=210 SSt=213	<0.001
	26-30 years old	5.01	0.69			
	31 years old and above	4.27	0.92			
	2	3.63	0.66			
Level	3	4.33	0.40	(F) 155.24	SSw=209 SSt=213	<0.001
	4	4.56	0.27			
	5(Interns)	5.67	0.62			

The significant difference in the use of EBP to age explains that students are more practiced in applying evidence-based processes. In this context, the use of EBP in the clinical setting is observed while the students grow. Indeed, when the curriculum introduces the application of evidence-based practice in the early years, it experiences some improvements along with their practice while they are moving to another stage. The level of understanding for maturing students is already on the rise, compared to those who have just begun to learn. Matured and experienced students who practice EBP in this stage are already taking on responsibility, thus utilizing their experience to carry out the task. According to Nortvedt and Jamtvedt (2009) and Mokhtar et al. (2012), age, as well as the number of years in the practice, provide confidence to carry out routine tasks and manage unforeseen events. The implementation of evidence-based practice in the clinical area explains the foregoing result. Newer nursing students are still in the introduction level of EBP compared to students in the higher years, where they are asked to find clinical questions and eventually utilize them in their clinical area. According to Melnyk et al. (2008), the strength of EBP is assumed to increase with age

that may factor in the application of evidence-based practice in the clinical setting. The findings of this study revealed no significant difference between the uses of EBP and sex. This implies that sex is not a parameter to be considered when using EBP. The requirement in the curriculum in the conduct of searching for evidence-based studies in the clinical setting explains this present finding. However, studies conducted on the professional nursing level found that female nurses have less practicing research than their male counterparts (Aburuz et al., 2017) despite the nursing curriculum requiring both male and female nursing students to practice evidence-based practice in their undertakings. However, it is important to consider that learning needs and culture dictate the variation in female to male nursing students who implement EBP. For example, male students have limited practice because there are restrictions in the care of female patients, and this limits the application of EBP in clinical practice. This current finding should be a paramount consideration to the educational planners who must consider gender in the approach to strategizing the requirement in EBP.

significantly. However, in general, consideration of the specific variables must be put into context that expected outcomes must be translated into evident action (Alshammari et al., 2018). The present finding contributes to identifying the barriers in the implementation of the EBP with undergraduate nursing students. Eliminating such barriers can help the nursing education policymakers properly address the implementation of EBP in the earlier years of these future nursing professionals.

The nursing interns or fifth-year level, are required to observe the process of EBP, as documented in their clinical practice objectives. Being in the transition period from being a student to full-time nursing care (Alshammari et al., 2020), they have been required to attend orientations of EBP prior to deployment. Given this situation, Song et al. (2019) argued that it is important to equip nursing students with the required knowledge prior to their clinical practicum. In this present finding, nursing interns have been perceived to assume their role in implementing the process of EBP. Indeed, it is important that the practice of EBP must be set at the start of the assumption of the role of the clinician. According to Ferguson and Day (2007), a climate of EBP must be fostered and advocated to provide

mentorship for the development of EBP competencies from the beginning of practice. This current finding contributes to the program developers' understanding to ensure continuous improvement for the interns as well as helping the students appreciate the essence of EBP in their practice. As such, EBP integration in the students' and interns' level practice is advantageous and provides an opportunity to grow in the profession.

## 5. Conclusion

Demographic information of the student nurses, such as sex, is not a determinant in implementing EBP. However, age and year level have been found to be significant in the implementation of EBP. Findings contribute to the development of the improvement of the program curriculum to reinforce the involvement of students in learning and practicing the evidence-based process.

## Compliance with ethical standards

## Conflict of interest

The authors declare that they have no conflict of interest.

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