Health Assessment in the New Curriculum: A Descriptive Study on Student Nurses' Competence in Performing Physical Examination

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ABSTRACT

Patient health assessment is crucial to the practice of nursing. In the current nursing curriculum in the Philippines, a course for Health Assessment is offered in the summer session between first and second year and consists of lecture hours and related learning experience (RLE). Considering the importance of efficient and accurate assessment of patient health that the nurse must apply consistently in practice as a professional, the researchers conducted a survey to explore if the current health assessment course is adequate or may by modified or expanded to better position nursing graduates to enter the profession.

Third and fourth year level nursing students in four different colleges provided demographic information and performed a self-assessment of their level of competence and confidence of knowledge and skills in performing physical examinations. Because of the age, gender and marital status similarities of those surveyed, no competence and confidence correlations based on demographics could be found. Significant correlation exists between perceived knowledge and performance competency, but not between educational levels, which indicates the importance of increasing student assessment practice and skills feedback to continually raise their overall competency levels throughout their educational experience. There were differences in knowledge and competency among the various schools, but since the survey included only four schools, this may not be significant.

Keywords: health, assessment, curriculum, competence, physical, examination

INTRODUCTION

Nursing, as in all professions, requires formal classroom education on a range of subjects that provide a strong base for ultimate practice of the profession. Complementing classroom lessons are related learning experiences in various hospitals and clinics to enable students to witness and to some extent actually apply their ever expanding knowledge gained in the classroom.

Patient health assessment is the initial applied skill required in clinical practice. Measurement of vital signs, observation of patient physical condition, attainment of health history of patient and family as well as patient psychosocial information provide the database upon which initial diagnosis and resultant initial treatment begins. To the extent, the student is able to skillfully perform patient health assessment positions him or her to confidently advance to the practice of other nursing skills. It emboldens the student to acquire and practice new clinical duties encountered on the road to graduation.

Health assessment is very crucial to the practice of nursing or delivering nursing care. It asks about or observes every area of the body, mental and social health, and identifies problems through the assessment. Through assessment, a nurse would not be as aware of the health problems affecting a patient, or be prepared to do health teachings that the patient needs. A nurse, with proper education and knowledge, training, and assessment skills can carry out nursing duties that promote and protect the health and well-being of each patient.

In the Philippines, Health Assessment in the old curriculum was only incorporated in nursing major subjects. A revision in the curriculum by the Commission on Higher Education, CHED, in 2009 included, among other items, a separate course for Health Assessment. It is offered in the summer session between first and second year. It consists of 36 lecture hours and 51 hours related learning experience (RLE). The student begins this course with two semesters of classroom work and no experience in a hospital environment. Considering the importance of efficient and accurate assessment of patient health that the nurse must apply consistently in practice as a professional, the researchers desire to explore if the current health assessment course is adequate or may by modified or expanded to better position nursing graduates to enter the profession.

The researchers believe that the best place to develop and master health assessment skills is in the clinical environment. Classroom instruction provides an understanding of the techniques to be used and the concurrent

related learning experience undertaken during the Health Assessment course allows.

Review of Related Literature and Studies

Nursing Health Assessment is a vital aspect of nursing practice (Bradshaw and Merriman 2008). It provides the foundation for good quality nursing care and intervention. Practicing and developing the knowledge and skills of Health Assessment, a nursing student will develop confidence in understanding and responding to the client's need (Jarvis, 2012). According to Lees & Hughes (2009) a hospital unit success in patient safety is dependent on the level of confidence and competence of the entire nursing team in the assessment of a patient.

Without proper knowledge in health assessment the nursing students cannot develop a confidence of applying their skills in a real situation especially in their clinical duty and their learning process can also be affected. Their progress can be slow down because of the tendency to go back and try to review unclear information. According to Etheridge (2007), lack of confidence of the students has a great negative impact in their learning new information and skills and dealing with challenging situations and they often visualize defeat before it occurs.

While not specifically targeted to health assessment, Clark and Holmes (2007) concluded that most of newly graduated nurses lack knowledge, skills or confidence needed for independent practice. Saver (2009) analyzes Benner's five stages of nursing skills acquisition from novice to expert. Saver states that all nursing gradually shall have progressed beyond the novice stage defined as having no experience beyond completion of specifically expressed "rules". Clinical experiences as part of nursing school curriculum must position the student to be able to formulate guidelines that dictate actions. This would place the student at Benner's second level: advanced beginner.

Giddens (2007) cites the importance of relevant practical instruction of nursing students to better equip them to competently and efficiently perform physical examinations.

According to Dixon (2007), physical assessment is an important component of overall patient health assessment. The nurse must perceive this to improve health outcomes. A Journal of Korean Academic Nursing study concluded even practicing nurses should be provided with continuing

educational opportunities in physical assessment to increase skill levels and confidence (Shim et al., 2009). Another study in Australia considered using simulation to enhance graduate nurses' health assessment knowledge and skills and in turn may facilitate an increase in nurses' competence and confidence and might help in reducing the knowledge and skill 'decay' phenomenon (Shepherd, et al., (2007).

Unpleasant and negative experiences can affect the level of self-confidence of a student and as a result he or she may drop-out of the nursing program. Increased self-confidence and empowerment is synonymously interconnected to better learning and a catalyst to a positive outcome in any situation whether it may be a clinical situation or an everyday life situation (Bradbury-Jones, et al. 2007).

According to a research from Harvard by Roland Fryer (2011), time has a great impact on academic outcomes of a student. In his research, he included many traditional measures like teachers' credentials and class size and they found that those factors had only weak correlations with student achievement. Instead, his research determined that instructional time—measured as the time students were actually engaged in learning. In the nursing curriculum, the health assessment course is taken during summer class between the first and second year of study. The course consists of three units, two units of which are lecture and one unit of RLE.

There is an evidence that feedback is an essential component of the student learning process for effective student learning in clinical practice. It is important for the student's maturity because it renders direction and help in boosting confidence, motivation and self-esteem (Clynes and Raftery, 2008).

There are factors that influence the confidence of student nurses that range from attaining competence skills to achieving relevant and good communication with patients, relatives and health team members. The achievement of competence in a skill enables the student to develop personal and professional confidence and develop their identity as a nurse (Bembridge and Jeong, 2010).

The researchers want to explore whether this is adequate or perhaps can be enhanced for the students to improve their skills in this important area of nursing practice.

Research Framework

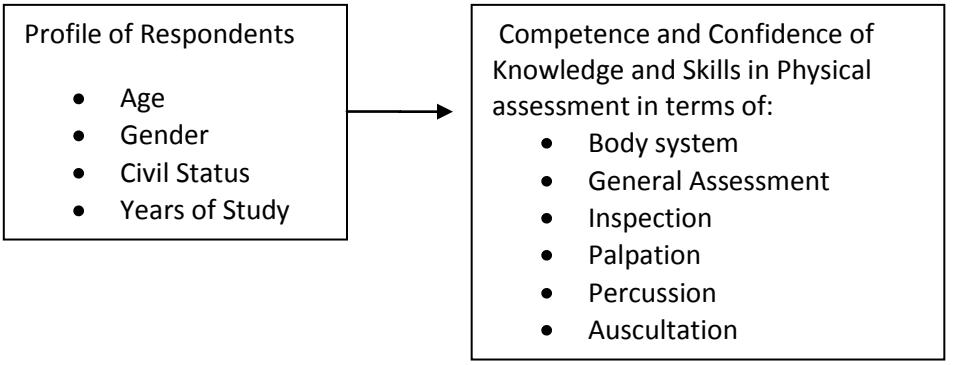

Figure 1.1 Conceptual Paradigm of the Study

Theoretical Framework

Albert Bandura's social learning theory (Bandura, 1982) is referred to by Linh Drexler (2009) as key to improving nursing students' confidence. Bandura is recognized as one of the most influential psychologists of all time (Cherry, 2010). Bandura theorizes that people learn from one another and that enactive attainment of information has the most impact on one's self confidence. Enactive attainment of information involves firsthand experience to practice and perform skills and procedures. As successful accomplishments in practice and performance are perceived, self-confidence will increase. Likewise, perceived failures reduce confidence. It is important not only to obtain feedback, but to continually practice and perform, especially in areas where skills are deemed deficient.

In Bandura's social learning theory, three other sources of information that judgments about self-confidence are derived are vicarious experiences, verbal persuasion and physiological state. Vicarious experiences are akin to modeling. One can witness another's successful performance and relate that to one's own ability to effectively handle difficult situations. Verbal persuasion, especially praise, is an effective input to increase self-confidence and motivate successful achievement. Physiological states such as stress, depression and anxiety can negatively affect one's self confidence.

Benner (1984) established a 5-step model that can help nurses understand how to develop their expertise to eventually be experts in the

profession. The five steps are: novice, advanced beginner, competent, proficient and expert. Essentially, the student nurses/practicing nurses' progress from no experience in situation in which they are expected to perform to beginning formulating guidelines that dictates action. Then as practicing nurses to view actions in term of goals and gains and to then view situations as "wholes" rather than parts. Eventually to attain an expert status whereby the expert nurses know what need to be done based a well develop ability. The expert nurse has an intuitive grasp of the situation based on knowledge and experience.

The nursing curriculum provides a broad and comprehensive base of learning to give graduates ample opportunity to pass the Nursing Licensure Exam (NLE) and to enter the profession with adequate skills to perform. One of these skills, health assessment, requires physical measurements, patient-provided information and observations based on a framework of guidelines to be followed. As in any profession, competency is directly correlated with experience and self-confidence. In health assessment, the questions asked and evaluation of the answers can be improved with practice. Furthermore, psycho/physical observations lead to improved diagnosis as experience is gained.

The literature is abounding with articles stating a general observation that new graduate nurses require improved health assessment skills. The researchers desire to obtain feedback directly from the students as to their own perception of their ability to assess patient health. It would be expected that the confidence level will increase in direct proportion to the number of years of study.

Purpose of the Study

The purpose of this study is to determine, as obtained from the results of our survey submitted by them, the level of competence and confidence of their knowledge and skills in performing physical examination by Level 3 and 4 Nursing students in De La Salle University Lipa; First Asia Institute of Technology and Humanities; LPU – St. Cabrini College of Allied Medicine; and Lipa City College.

Statement of the Problem

1. What is the demographic profile of the respondents for third and fourth year levels in terms of: age, gender and civil status?
2. How do the participants rate their health assessment proficiency in terms of:
   a. Knowledge
   b. Skills (general assessment, inspection, palpation, percussion and auscultation).
3. Is there a significant relationship between the demographic profile of the respondents and their health assessment knowledge and skills?
4. Is there a significant relationship between knowledge and skills?
5. Is there a significant difference in the knowledge and skills between the third and fourth year levels?
6. Is there a significant difference among the four colleges surveyed?

METHOD

The research was a descriptive study of health assessment knowledge and skills of the nursing students who have already taken health assessment course. A descriptive and comparative survey was employed to collect data using a 2-page questionnaire.

The 2-page questionnaire is an 81-item answered using a four-point scale and was administered to gather data about individual nursing students self-perceptions regarding health assessment. The 2-page questionnaire is made up of two parts, namely health assessment knowledge assessment about the eleven body systems and health assessment skills categorized by general assessment, inspection, palpation percussion and auscultation.

Participants of the Study

Participants were nursing students currently attending in First Asia Institute of Technology and Humanities (FAITH) in Tanauan, Batangas; De La Salle University-Lipa in Lipa City, Batangas; LPU – St. Cabrini College of Allied Medicine in Km. 54 National Highway, Makiling, Calamba City, Laguna and Lipa City College in Lipa City, Batangas who are in the Level 3 and Level 4 and have taken Health Assessment course and have two or more semesters of clinical experience.

Data Gathering Tool

The data collection instrument to be used is a researcher developed questionnaire-type form and slightly patterned after a similar research study conducted in Australia composed of two parts. First part is about demographic information; the second part contains of two 4-point scales. The first is composed of 11 questions about knowledge in health assessment specified by each body system. For the 4-point scale pertains to knowledge in health assessment, 1 means to have the least extent of knowledge, 2 means to have a moderate extent of knowledge, 3 means to have a large extent of knowledge and 4 means to have a very large extent of knowledge. The second part is for skills in health assessment categorized by general assessment skills, inspection skills, palpation skills, percussion skills and auscultation skills composed of 70 questions about different skills in physical assessment. For the 4-point scale pertains to skills in health assessment, 1 means to have not performed this, 2 means to have performed this but do not feel confident of assessment capability, 3 means to have performed this but need further skill improvement, 4 means to have performed this and feel proficient on this assessment skill.

Data Gathering Procedure

The researchers submitted a request letter to the participating schools asking for the population of their third year and fourth year nursing students then submitted a second letter for an approval from the dean of college of nursing to conduct the survey in their third year and fourth year nursing students. Survey was performed on a scheduled date set by each participating college. After giving the questionnaires to the participants, they were given the opportunity to leave if they do not wish to participate. Majority remained to complete the questionnaire. Instructions for completion and the purpose of the research were presented on the first page of the questionnaire. Students were assured that participation for the survey was entirely voluntary and that all information will be kept in strict confidentiality.

Data Analysis

The researchers utilized the following statistical techniques to analyze and interpret the data:

Frequency is how often values occur within a range of values. The data will be collated and tabulated to determine frequency of responses.

Percentage is used as a descriptive statistic to denote the proportion contributed by a part in a whole, thus this formula was used.

Mean: The mean is the arithmetic average of a set of values, or distribution.

The level of significance was set at alpha = ≤ 0.05. The data were analyzed using the Statistical Package for the Social Sciences (SPSS) software ver. 20.0.

RESULTS AND DISCUSSION

1. Demographics

Age, gender and civil status for third and fourth year of study data were obtained from all of those surveyed. The frequency distribution is presented in tabular form for each of these demographics.

Table 1.1 shows the frequency distribution of the subjects grouped according to age.

Table 1.1 Frequency Distribution Table of Subjects Grouped According to Age

Age	Frequency	Percent
Between 17 – 20 y/o	174	83.7
Between 21 – 25 y/o	27	13.0
Between 26 – 30 y/o	4	1.9
Between 31 – 35 y/o	2	1.0
Between 36 – 40 y/o	0	0
41 – above y/o	1	.5
Total	208	100

As shown in Table 1.1, majority of the respondents are at the age bracket of 17-20 years old. Nearly 97% of the respondents are in the age of 25 or younger. While there are only three respondents or 1.5% in the age range of 31 and above. Since the average age of high school graduates in the Philippines is about 16 years old, third year and fourth college students would be in the 18 to 22 year old range, which consistent with the survey data.

The frequency distribution of the subjects grouped according to gender is presented in Table 1.2.

Table 1.2 Frequency Distribution Table of Subjects Grouped According to Gender

Gender	Frequency	Percent
Male	70	33.7
Female	138	66.3
Total	208	100

About two-thirds of the subjects are female. The proportion of male students in the population is lower than the approximate 50/50 ratio. Nursing has historically been a female dominated profession for various reasons.

Table 1.3 Frequency Distribution Table of Subjects Grouped According to Civil Status

Civil status	Frequency	Percent
Single	194	93.3
Married	13	6.3
Others	1	.5
Total	208	100

Well over 90% of those surveyed are single which is expected for the age range of the students surveyed.

Table 1.4 Frequency Distribution Table of Subjects Grouped According to Year Level

Year level	Frequency	Percent
3rd year nursing students	62	29.8
4th year nursing students	146	70.2
Total	208	100

As shown in Table 1.4, 4th year nursing students outnumber 3rd year by about a 2 to 1 ratio. The decline in the number of nursing students in the

Philippines continues to decline primarily due to the drop in demand for overseas positions. In 2011, Health Secretary Enrique Ona advised incoming college students to stay out of nursing. He noted that there was an oversupply of nurses here and less positions available abroad (Cimatu 2011).

Knowledge and Skills Assessment

The subjects were asked to undertake a self-assessment of a) their knowledge of the various body systems to perform patients' health assessment and b) their health assessment skills proficiency.

The following Table 2.1 shows the weighted mean of the 4-point scale and its description.

Table 2.1 Weighted mean of 4 point scale and its description

Weighted Mean	Description	
	Knowledge	Skills
1.0-1.49	least extent	Not performed
1.5-2.49	moderate extent	Not confident
2.5-3.49	large extent	Needs further skill improvement
3.5-4.0	very large extent	Confident

From the responses, the mean and standard deviation were calculated for knowledge and overall skill assessment and for each of the five skill subsets. These are presented in Table 2.2.

Results revealed that the knowledge of the respondents (2.96) were at the large extent while their skills (3.19) showed that they can perform physical assessment skills but need further improvement. The distribution of skills in general assessment skills (3.25), inspection skills (3.34), palpation skills (3.18), percussion skills (2.95), auscultation skills (3.20) were all at the same range of average mean 2.5 – 3.49 which defines they can perform these but need further improvement. It also revealed that the respondents were more familiar in performing inspection skills (3.34) but were less familiar in performing percussion skills (2.95), with a mean difference of 0.39.

Table 2.2 Mean and Standard Deviation for Knowledge and Skills

	Mean	Standard Deviation	Verbal interpretation
Knowledge	2.96	0.674	To a large extent of knowledge
Overall Skills	3.19	0.498	Performed but need further skill improvement
Skill by Subset:			
General assessment	3.25	0.518	Performed but need further skill improvement
Inspection	3.34	0.530	Performed but need further skill improvement
Palpation	3.18	0.587	Performed but need further skill improvement
Percussion	2.95	0.729	Performed but need further skill improvement
Auscultation	3.20	0.615	Performed but need further skill improvement

Each of the demographic profiles were correlated by knowledge and over all skills as shown in Table 2.3

Table 2.3 Pearson Correlation of demographic profile of the respondents and their health assessment knowledge and their health assessment skills

		Knowledge	Skills
Age	Pearson Correlation	-0.039	-0.016
	Sig. (2-tailed)	0.574	0.824
Gender	Pearson Correlation	-0.044	0.079
	Sig. (2-tailed)	0.530	0.254
Civil Status	Pearson Correlation	0.132	0.097
	Sig. (2-tailed)	0.058	0.162
Year level	Pearson correlation	0.121	0.056
	Sig. (2-tailed)	0.081	0.425

As shown in Table 2.3 each of the demographic profiles of respondents is not significantly correlated to their health assessment knowledge and skills base on the magnitude of the sigma (2-tailed).

For the Pearson correlation, if both signs are negative, an inverse linear relationship may exist. That is, both knowledge and skills would increase as its related demographic decreases. Similarly, if both signs are positive, would indicate that knowledge and skills would increase as its demographic would increase.

For age, there is a negative correlation for both knowledge and skills that indicates as age increases both knowledge and skills decrease. However, the magnitude of both correlations are nearly zero and likely not statistically significant. Furthermore, in the frequency distribution more than 96% of respondents are 25 years and younger (201 of the 208 respondents). As such, it is difficult to find any correlation to age and knowledge and skills. A study by William, et al. (2008) showed that older students in this case, second coursers, exhibits higher confidence level and clinical competencies than younger traditional students. Thomas, et al. (2012) determined that age was statistically related to overall grade point average.

For gender, the Pearson correlation for knowledge is negative and positive for skills which imply the results are neither positively nor negatively correlated. Researchers have unable to find explicit literature references that statistically compare the relationship of gender and proficiency. Numerous references cited an absence of the capabilities of male nurses were similar of their female counterparts.

In terms of civil status, both the correlation for knowledge and the correlation for skills are positive. This indicates that married students tend to assess themselves as having higher levels of knowledge and skills than the single students. However, this is not statistically significant since only 6% of the respondents are married. In the study done by Thomas, et al. (2012), marital status appeared to be positively related to higher grade point average. They cited reasons such as higher levels of maturity, responsibility and time management. However, age was not accounted for in their initial conclusion and when results adjusted for age, no statistical correlation between marital status and grade scores existed.

Year level is positively correlated both for knowledge and skills. This implies that knowledge and skills increase as year level increases. This is analyzed in more detail later.

The correlation between knowledge and skills is presented in Table 2.4. This is not correlated to any specific demographic, but instead pertains to the entire population.

Table 2.4 Relationship between Knowledge and Skills

	Pearson Correlation	P-Value	Interpretation
Knowledge & Skills	0.447	1	Highly (sig 2-tailed = 0.000)

As shown in the table above, there is a significant relationship between knowledge and skills. As the students assessed themselves knowledgeable of body systems, they rated themselves skillful as well. Students who rated their knowledge to be low or moderate tended to show less confidence in their skills proficiency. Doody, et al. (2012) stated that while that more than 90% of students surveyed believed they have acquired adequate knowledge, enough to prepare them initially as new nurses. Also, a high percentage of the students felt confident in their overall skills proficiency.

Knowledge and skills for the third and fourth year were examined to determine if there is a significant difference between them. The Levene's Test for Equality of Variances and the T-Test for Equality of Means were used and are presented in Table 2.5.

Levene's Test for Equality of Variances

Table 2.5 Independent sample test for knowledge and skills between third year and fourth year

	Levene's Test for Equality of Variances		t-test for Equality of Means		
	F	Sig.	T	Df	Sig. (2tailed)
Knowledge Equal Variances assumed	.234	.629	1.752	206	.081
Equal variances not assumed			-1.786	120.321	.077
Skills Equal Variances assumed	.036	.849	-.800	206	.425
Equal variances not assumed			-.815	120.103	.417

Independent sample test results revealed that mean scores for both year levels are not significantly different at 0.05 level of significance. Levene's test results were set in variable using equal variances assumed having no significant difference results between ere and fourth year level on their level of assessment for both knowledge and skills.

Even if variance is not assumed equal, results still revealed that there is no significant difference between knowledge and skills for both year levels – third year and fourth year.

The mean and standard deviation of knowledge and skills for third and fourth year levels are presented respectively in Table 2.6.

Table 2.6 Mean and Standard deviation of knowledge and skills between third year and fourth year

	N	Mean	Standard Deviation
Knowledge			
Third year level	62	2.8389	.64828
Fourth year level	146	3.0171	.68029
Skills			
Third year level	62	3.1477	.48275
Fourth year level	146	3.2082	.50561

The mean for knowledge of the third and fourth year is only +/- 3% from each other and the standard deviation is only +/- 2.5%. For skills, the mean for the two year levels is only +/- 1% and the standard deviation is +/- 2.3%. Clearly, students in third year rate themselves on the average at about the same levels of knowledge and skills as the fourth year.

Intuitively, it would be thought that both knowledge and skills proficiency would be directly related to the number of years of study. One explanation for this could be the much lower number of third year students compared to fourth year which would equate to higher instructor to student ratio for the third year. Chingos (2012) reports that while many studies indicate that while there are some positive effects of higher teacher to student ratios, the benefit is inconsistent across numerous studies and often small. Another explanation may be that as students are exposed to more real life situations in their clinical training, they may experience some degree of self-doubt. According to Drexler (2009), final year nursing students experience anxiety, apprehension doubt in their capabilities and lacking confidence in fulfilling expectations and responsibilities of professional nursing. Bembridge and Jeong (2013) state that even a confident nursing student can experience self-doubt of skills proficiency when faced with unfamiliar or difficult situations.

Since the survey was conducted at four different colleges, the knowledge and skills among the four colleges have been analyzed to determine if there is any significant correlation that exists. In the following two Figures 2.1 and 2.2,

the mean of the surveyed results for health assessment knowledge and skills, respectively, is presented for each college.

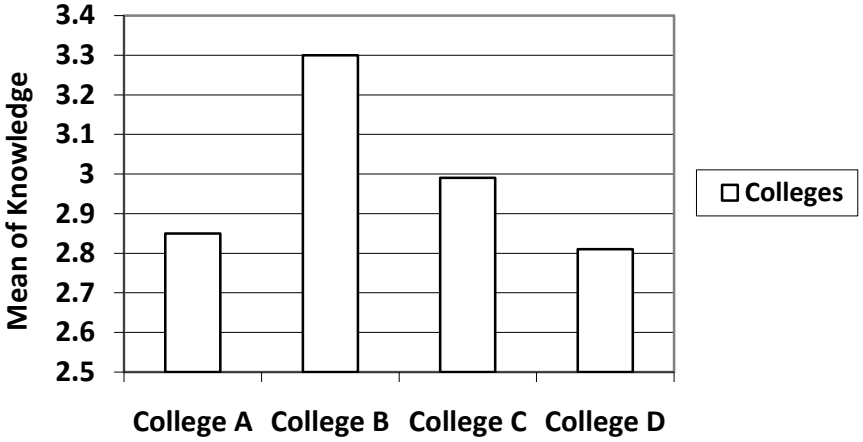

Figure 2.1 Comparisons of the Means for Knowledge for the Four Colleges

The mean of knowledge for college B is more than 10% higher than other colleges. Results for colleges A and D are similar.

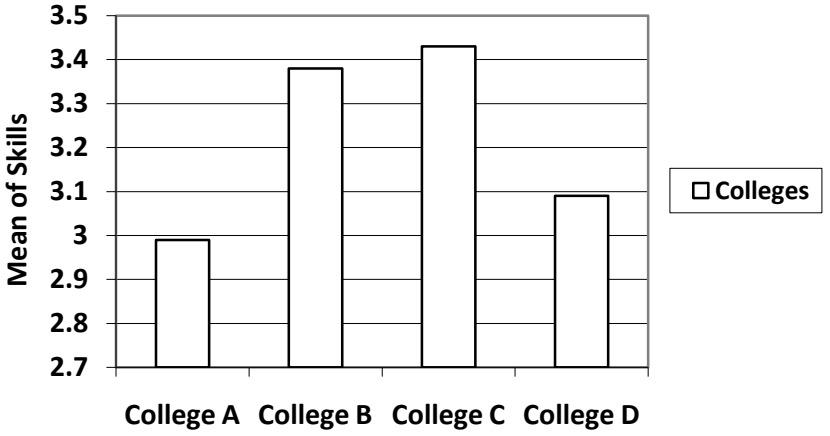

Figure 2.2 Comparisons of the Means of Skills for the Four Colleges

Colleges B and C have similar means of skills at about 3.4 level and colleges A and D have similar means of skills, but about 10% lower than the other two. A homogeneous subset for the mean of knowledge for the group of colleges at the subset for alpha equal to 0.05 level of significance is shown in Table 2.7.

Table 2.7 Homogeneous Subset for Mean of Knowledge for the Group of Colleges

		Subset for alpha = ≤ 0.05	
School	N	1	2
D	63	2.8110	
A	62	2.8416	
C	35	2.9954	2.9954
B	48		3.2998
Sig.		0.578	0.149

Colleges A, C, and D are statistically similar at alpha = 0.05 to form a subset. Certainly from Figure 2.1, colleges A and D have similar means. Since the mean for college C is also statistically close enough to college B both college B and C also form a subset.

Table 2.8 Homogeneous Subset for Mean of Skills for the Group of Colleges

		Subset for alpha = ≤ 0.05	
School	N	1	2
A	62	2.9989	
D	63	3.0968	
B	48		3.3846
C	35		3.4306
Sig.		0.783	0.971

Consistent with Figure 2.2, the mean of Skills, college A and D form a subset, as do colleges B and C.

The statistical significance of health assessment knowledge among each of the four colleges is presented in Table 2.9. A Post Hoc Test was used because the number of colleges is more than two.

Table 2.9 Post Hoc Test. Multiple Comparison of Knowledge among groups of Colleges

Dependent Variable	(I) Group	(J) group	Sig.
Knowledge	College A	College B	.005
		College C	.741
		College D	.995
	College B	College A	.005
		College C	.222
		College D	.002
	College C	College A	.741
		College B	.222
		College D	.613
	College D	College A	.995
		College B	.002
		College C	.613

There is a statistically significant correlation between colleges A and B since sig. (2-tailed) is 0.005. Also, with a sig. (2-tailed) of 0.002, there is a significant correlation between colleges B and D.

The results of the Post Hoc Test for the statistical of health assessment skills among the four colleges are shown in Table 2.10.

As shown in Table 2.10, there is a statistical correlation for health assessment skills between colleges A and B (sig = 0.001) and colleges B and D (sig = 0.018). Note that both pairs of colleges A, B and B, C are also statistically correlated for health assessment knowledge. There is also a statistical correlation for skills between colleges A and C (sig = 0.000).

Table 2.10 Post Hoc Test. Multiple Comparison of Skills among Group of Colleges

Dependent Variable	(I) Group	(J) group	Sig.
Skills	College A	College B	.001
		College C	.000
		College D	.714
	College B	College A	.001
		College C	.978
		College D	.018
	College C	College A	.000
		College B	.978
		College D	.011
	College D	College A	.714
		College B	.018
		College C	.011

CONCLUSIONS

1. The population surveyed is predominantly 25 years old or younger, female and single. Therefore, these specific demographics are not relevant with regard to each and any correlation to the health assessment knowledge and skills for the overall population surveyed. Indeed, statistical analyses conclude there are no significant relationships between the respondent's self-assessed health assessment knowledge and skills and their age, gender and civil status.
2. There is no significant correlation to the respondents' year level and health assessment knowledge and skills. This finding was counter to the researchers' a priori belief but confirmed by several statistical analysis tools.
3. There is a significant relationship between knowledge and skills of the respondents unconstrained by any other variable such as a specific demographic, year level and college attended. The researchers conclude that students who believe their knowledge base to be more to be

extensive will be more confident to perform skills tasks and rate themselves with a higher level of skills performance proficiency.

4. Health assessment knowledge and skills are statistically related among certain pairs of the colleges surveyed. The population for each of the college was sufficiently high enough to disregard these results as not meaningful. The researchers are unable to conclude why students of certain colleges assessed their knowledge and skills significantly higher than those students from other surveyed colleges. This survey did not attempt to gather information, such as teaching styles, specific hospital exposure differences, and the college skills laboratory experience. The researchers believe that this should be examined for a larger population of colleges, and if correlations among the colleges exist, to determine if there are any statistically supported explanations for the differences among the colleges.
5. There is a significant relationship between the knowledge and skills in health assessment means that the knowledge is not always reciprocal to skills.

RECOMMENDATIONS

1. Colleges of Nursing, with the support of clinical instructors, should enhance the knowledge and skills of the nursing students by including more opportunities to practice health assessment, to gain skilled practice during clinical rotations. This can be accomplished by having encouraging and supportive educators. It is therefore essential that educators always lead the way in giving the most constructive confidence-building environment they can, whenever nursing students can freely ask questions and feel safe and encourage doing so and the educators willingly and supportively guide the students in the process of finding answers and at the same time honing their knowledge and skills.
2. To the colleges of nursing, and with the support of the clinical instructors, encourage the development of health assessment skills proficiency by increasing skills practice in hospital simulation laboratories and in actual clinical settings; provide timely feedback of performance; create an environment supportive of student inquiries without fear of negative consequences.

3. For the nursing students, to seize every opportunity in every clinical rotation to perform health assessment skills, and request input from the clinical instructors when unsure and demand feedback so that they can increase their knowledge and health assessment skills proficiency.
4. For the nursing students, to make use of all the equipment in the skills laboratory, similar to hospital simulation, to enhance their nursing skills.
5. For the researchers, to survey subsequent nursing classes to observe if similar findings occur, specifically the absence of correlation between years of study and health assessment knowledge and skills; to broaden the survey to include additional colleges to determine if there are correlations among various colleges and endeavor to understand why.

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