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Long Paper

Competencies of Advanced Cardiac Life Support (ACLS) Nurses on Intensive Care Unit (ICU) Protocols

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Abstract

The nursing profession is one of the indispensable professions created by the regulatory board because of its demand in the medical arena. The entitlement was due to passing the board for nursing; competence was necessary to always keep up with the procedure. The researcher conducted the study to measure the competency of (ACLS) nurses on ICU protocol and analyze the strengths and weaknesses of the ICU nurses. A descriptive and correlational research design was adopted and gathered data using a questionnaire. The study was conducted on the ACLS ICU nurses and Head Nurses/Nurse Supervisors of selected secondary hospitals in Eastern Pangasinan. The study results showed that the majority were young adults dominated by females and not in marital relationships. Most did not pursue a higher degree of learning and directly gave nursing care to patients. At the same time, the head nurse/supervisors who oversee the ICU nurses had a few years in service and had undergone a few related pieces of training on ACLS. The respondents were competent. The differences in competency across age and gender were found. Civil status showed that married nurses had significantly higher levels of competence in professional and insignificant areas, along with technical, relational, and other pieces of training. Other variables were detected to show negligible relationships. Enhancement training should be conducted which includes a review of the existing policies and guidelines to grasp the competencies, knowledge, and skills.

Keywords – Advanced Cardiac Life Support, ICU Nurse, Enhancement training

INTRODUCTION

The nursing profession is an indispensable profession, created by the regulatory board because of its demand in the healthcare arena. There is a need for an individual to be cared for, and in times of emergency, only licensed medical practitioners are entitled to give medical attention. Due to passing the board for nursing training, skills are necessary to keep up with the procedure in whatever generation.

Whelan (2012), Adjunct Assistant Professor for Nursing, University of Pennsylvania, stated that as the twenty-first century continues, the profession of nursing faces plenty of difficulties. A shortage of nurses occurs, and a solution to maintaining an adequate supply remains elusive. As the baby boom generation ages, many older Americans may strain the health care system and require increased nursing care. The demand for twenty-first-century health care services will still test the nursing profession's ability to take care of high-caliber care that meets current societal needs. To meet the current societal needs, the demand for high-caliber health care services should be focused on through an adept healthcare system and nursing care.

The nursing profession has continuously demonstrated its capacity to adapt to evolutionary changes and varied health care needs. It remained an exceedingly popular and highly respected profession that attracted large numbers of recruits to its ranks. There is little doubt that nursing will still maintain its status as an essential profession serving the health needs of the state.

A good nurse in the Intensive Care Unit (ICU) responsible for operating the entire nursing process in a critical area needs ACLS for quality service and assurance of correct prosecution of demanded protocols and norms. Support is required in critical areas such as planning and coordinating the development and maintenance of the care training pathway. The nanny has to guarantee and promote the care durability and integration between different areas in nonstop commerce with the other health care experts. The nanny has to reach the necessary capability in the clinical practice to guarantee high-quality care and increase staff satisfaction as well.

LITERATURE REVIEW

As cited by Gary et al. (2015), nurses in today's healthcare environment often experience higher-acuity patients that need advanced skills like Advanced Cardiovascular Life Support (ACLS). During initial training, the skills obtained from an ACLS certification course can help new nurses assess patients with a more critical eye, evaluating changes that indicate patient deterioration. ACLS certification supports clinical assessment skills, critical decision making, and prioritization, which assists the new nurse in making these assessments. Nurses need advanced skills obtained from an ACLS certification, which includes assessment skills, critical decision-making, and prioritization to help assess

patients with a more critical evaluation change. Better patient outcomes result from novice nurses' ability to discern and intervene appropriately for acute patients.

In a study by Tanner et al. (1993), 130 nurses were interviewed individually and in groups and were asked to describe the meaning and importance of knowing their patients. Findings revealed that "understanding the patient" means being both aware of the patient's usual mode of reaction and knowing the patient as a human being. The focus on patients in the acute stage needs professional clinical judgment, which requires involvement and sets up the possibility for patient advocacy and learning about patient populations. This led to the creation of the Relationship-Based Care model, which is a professional practice with the patient and family at the center. The basis of the model is that all care delivery processes are focused on the patient and are supportive of the relationship with the patient, family, and healthcare provider. Relationship-Based Care (RBC). The model was a professional practice with the patient and family at the center. The basis of the RBC model is that all care delivery processes are focused on the patient and are supportive of the relationship with the patient, family, and healthcare provider. Further, Koloroutis (2014) cited that there were three crucial relationships in the Relationship-Based Care Model: the relationship between the care provider and colleagues, the patient, and the family. In the model, the interaction was the pivotal point where the patient's needs were both denied and met. With the crucial relationship between the care provider and the patient and family, the model was applicable as a guide for practice focused on patient-centered care. The model exemplifies the patient-nurse interaction as a way of knowing the patient and individualizing patient care.

As defined by the SCOL Centre for Continuing Education (2017), Advanced Cardiac Life Support, known as ACLS, is a protocol for managing patients who encounter severe medical emergencies such as cardiac arrest. ACLS teaches the participants to diagnose and administer care for an adult victim of cardiac and respiratory arrest and other cardiopulmonary emergencies. ACLS training emphasizes vital life support skills like Cardiopulmonary Resuscitation (CPR) for patient survival, integration of progressive cardiovascular support interventions, team interaction, and communication during resuscitation. ACLS is distinct from Basic Life Support, equipping healthcare providers with essential knowledge and skills. It focuses on the stabilization of patients before and after an emergency due to the progressive nature of several treatment techniques and the controlled availability of many emergency devices and medications (Bach & Grant, 2015).

Nurses from the Philippines have the reputation of being qualified and respected workers with high work ethics and high demand worldwide. This can be attributed to Philippine education patterned after the United States Curriculum, wherein the structure of the nursing training was academically and socially similar to the programs in the United States. The Commission on Higher Education (CHED) mandated accreditation for all nursing schools to ensure standards meet or exceed the minimum requirements of an international standard. As proof of acceptability and recognition, an increasing number of

international students have enrolled in tertiary education, and many countries send health science students to the Philippines (CHED, 2009).

The nursing professionals in the Philippines were educated through a combination of competency-based and community-oriented BS Nursing curricula grounded in liberal arts that strengthened the character and values of the person as a caregiver. The program must be able to apply analytical and critical thinking in nursing practice and be competent in the eleven areas of responsibility like safe and quality nursing care.

Despite existing competency frameworks that emerged from research in critical care globally and within countries, there is diversity and an ongoing debate regarding the level of necessary care education outcomes and competency acquired. Critical care nurses' competency needs to be determined for quality care and specialty development.

The Final Report of the Critical Care Secretariat and Patients' clinical situations could change rapidly in critical care in a hospital setting. Frontline nurses must be able to respond effectively and quickly to these changes, as cited by the 2010 Institute of Medicine report (IOM), the Agency for Healthcare Research and Quality (AHRQ) initiatives, and accreditation groups to prevent sentinel events. Because of nurses' 24/7 patient contact, they have substantial responsibility in identifying those subtle cues indicating deterioration in patients' condition before these sentinel events.

METHODOLOGY

The study used a descriptive research design. Descriptive research involves the collection of data to test the hypothesis established. Such information was gathered using a two-part questionnaire adapted from the Critical Care Nurses Association of the Philippines, Inc. Part I focused on the demographic profile of respondents; part II dealt with technical, mental, and professional competencies. A correlational study shows the quantitative analysis of the strength of relationships between two or more variables.

The study incorporated different statistical approaches to answer the research question that presupposes the grouping of respondents based on their competency of ACLS nurses (ICU) protocol regarding their profile variables. McCombes (2020) defines descriptive research design as research that aims to describe a population, situation, or phenomenon accurately and systematically.

The research locale was where the researcher was currently affiliated with his nursing profession. Glen (2018) cited total population sampling as a type of purposive sampling in which the entire populace of interest (a collection whose participants are proportional to a given characteristic) participated. This was the sampling method used by the researcher because the population was of a manageable size.

Table 1. Distribution of the respondents

Selected Secondary Hospital in Eastern Pangasinan		
Hospital	**Number of ICU nurses**	**Number of HN/NS**
Urdaneta Sacred Heart Hospital	20	3
Urdaneta District Hospital	4	0
Tayug Family Hospital	16	1
Total	**40**	4

This study mainly used a survey questionnaire, which was adapted from the Critical Care Nurses Association of the Philippines, Inc. The questionnaire has four parts: Part I focused on the respondents' demographic profile, such as achievement, years assigned in ICU, training, and pieces of training attended related to ICU Protocol. Part II dealt with the technical, mental, and professional competencies of ICU nurses in using technology and focused on the different aspects of professional practice, communication, and ICU nurses.

RESULTS AND DISCUSSIONS

Respondents Profile

Age. The respondents ranged from 21–25 to 41 years old and above. The significant populations were 21–25 and 26–30 years old, with a frequency of 13 or 30.2 %, followed by 30-35, with a frequency of 10 or 23.3 %. Three respondents (7.0%) were 36–40, while four (0.3%) were 41 and above. It can be gleaned from the data that most of the respondents were comprised of young nurses (21-25) or those who had been in the profession for about a decade (26-29).

Gender. The research population comprised male and female nurses. The majority were females (29, or 67.4%), and the rest were males (14, or 32.6%).

Civil status. The data in Table 2 indicates that most of the respondents were single (30 or 69.8%), compared to those married with a frequency of 13 or 30.2%. This has been attributed to the age range of the respondents, who were in their mid-twenties. This explains why singles made up the majority of respondents.

Highest Educational Attainment. The results showed that the respondents finished a bachelor's degree with a frequency of 42, or 97.7%, and one (2.3%) respondent held a master's degree. Most respondents did not pursue graduate studies after landing a job.

Position. Notably, the data in Table 1 revealed that along with function, most of the respondents were (ICU) nurses, with a frequency of 40 or 93%. In comparison, 3 or 7% hold a head nurse/supervisor position. It means that most of the respondents were ICU nurses who directly give nursing care to patients compared to the head nurses/supervisors who just oversee them.

Number of Years Assigned in the ICU. Most of the respondents were assigned to the ICU for 0–5 years, with a frequency of 34, or 79.1%. There were 6 or 14 % who had served the unit for 6–10 years, and 3 or 7 % were assigned to ICU ranging from 11–15 years. From the data, it can be gleaned that most ICU nurses have been in the service for a few years. This has been attributed to the age range of the respondents, which comprised those who were in their mid-twenties.

Training Attended. It reflects that most of the respondents had undergone training 1-3 times a year with a frequency of 28 or 65.1 %, followed by those with 4-6 with a frequency of 12 or 27%, 7-9 with a frequency of 2 or 4.7 %, and 10-15 pieces of training with a frequency of 1 or 2.3 %. The data indicates that most of the respondents had undergone several pieces of training on ACLS.

Level of Competence of Advanced Cardiac Life Support (ACLS) Nurses on ICU Protocols

Table 2 presents the position of the potential of ACLS nurses in ICU protocol. Grounded on the information in Table 2, all the pointers were rated "competent," which successively generally presents care research participants as more competent and assured in the exercise of their duties or functions relative to communication as a relational and mental ability but demands further interventions within the aspects of specialized and relational skills. Similar findings were brought before the authorization of CHED (2009) in its Memorandum Order (CMO)No.14 S 2009, which stipulates the Graduates of Bachelor of Science in Nursing. The program must be suitable to use logical and critical thinking in nursing practice and be competent within the eleven crucial areas of responsibility, one of which is safe and quality medical. The anteceding findings reply to similar results by Flinkman (2014), who stressed that nurses needed to use their acquired knowledge, train individuals for every situation, and acclimatize that knowledge and people skills to different circumstances.

ANOVA Results on the Difference in the Level of Competence of Advanced Cardiac Life Support (ACLS) Nurses on ICU Protocol Across Age

Table3 presents test results of the difference in the level of competency of the ACLS nurses on ICU protocol in terms of age. The computed T-values generated were higher than the set 0.05 level of significance. This showed that the result was not significant and led to the acceptance of the null hypothesis, which states that there exists no significant

difference in the level of competence of the nurses on ICU protocol across ages. It implied that the level of competency of the ACLS nurses on ICU protocol, along with technical, professional, communication, relational, and mental ability, were all comparable regardless of the age bracket of the nurse. Heydari et al. (2016) know that the level of competence and its related factors can help nurse managers improve the professional competence of nurses through assigning proper duties and implementing in-service training programs.

Table 2. Level of Competence of Advanced Cardiac Life Support (ACLS) Nurses on ICU Protocol

n=43

Categories	**Weighted Mean**	**Descriptive Equivalent**
Technical Competence	3.91	Competent
Professional Competence	3.98	Competent
Communication	4.03	Competent
Relational and Cognitive Competence	4.10	Competent
Overall Weighted Mean	**4.01**	**Competent**

Legend:

Statistical Range	**Descriptive Equivalent (DE)**	**Descriptors**
4.50 – 5.00	Highly Competent	The respondent performs, implements, practices, exercises, and always applies the skills excellently.
3.50 – 4.49	Competent	The respondent performs, implements, practices, exercises, and applies the skills excellently most of the times.
2.50 – 3.49	Moderately Competent	The respondent performs, implements, practices, exercises, and applies the skills excellently at times.
1.50 – 2.49	Slightly Competent	The respondent performs, implements, practices, exercises, and applies the skills excellently occasionally.
1.00 – 1.49	Not Competent	The respondent did not perform, implement, practice, exercise and apply the skills.

Table 3. ANOVA Results on the Difference in the Level of Competence of Advanced Cardiac Life Support (ACLS) Nurses on ICU Protocol Across Age

	Source of Variation	Sum of Squares	Df	Mean Squares	F-value	Sig	Remarks
Technical Competence	Between Groups	2.056	4	0.514	1.385	0.257	Not Significant
	Within Groups	14.080	38	0.371			
	Total	16.136	42				
Professional Competence	Between Groups	2.504	4	0.626	1.599	0.194	Not Significant
	Within Groups	14.875	38	0.391			
	Total	17.379	42				
Communication	Between Groups	2.935	4	0.734	1.547	0.208	Not Significant
	Within Groups	18.022	38	0.474			
	Total	20.958	42				
Relational and Cognitive Competence	Between Groups	1.996	4	0.499	0.907	0.469	Not Significant
	Within Groups	20.894	38	0.550			
	Total	22.890	42				
Overall Level of Competence	Between Groups	2.698	4	0.675	1.847	0.140	Not Significant
	Within Groups	13.878	38	0.365			
	Total	16.576	42				

Difference in the Level of Competence of Advanced Cardiac Life Support (ACLS) Nurses on ICU Protocol across Gender

Table 4 displays the t-test results on the difference in the level of competency of the ACLS nurses on ICU protocol across gender. As shown in the table 4, the computed t-values have significance values higher than the 0.05 level of significance. It indicates insignificant results and suggests acceptance of the null hypothesis. It means that male and female ACLS nurses have the same level of competency in ICU protocol along with technical, professional, communication, relational, and mental abilities. Abass and Soliman (2020) showed a statistically significant relationship between studied groups'

related to gender and performance in pretest (f = 4.772, p = 0.030) and posttest (f = 5.373, p= 0021). Further, Shahrakivahed (2015) reported statistical differences between the mean scores of knowledges concerning gender between the skills of men and women before and after training. Additionally, a study by Heydari et al. (2016) using a self-assessment tool has shown that gender was not associated with competence.

Table 4. t-test Results on the Difference in the Level of Competence of Advanced Cardiac Life Support (ACLS) Nurses on ICU Protocol across Gender

Aspect	Gender	N	Mean	Mean Difference	Standard Error Difference	df	t-value	Sig	Remarks
Technical Competence	Male Female	14 29	3.99 3.87	0.113	0.203	41	0.557	0.581	Not Significant
Professional Competence	Male Female	14 29	3.90 4.02	-0.124	0.211	41	-0.588	0.560	Not Significant
Communication	Male Female	14 29	3.98 4.06	-0.083	0.232	41	-0.359	0.721	Not Significant
Relational and Cognitive	Male Female	14 29	3.99 4.15	-0.155	0.242	41	-0.642	0.524	Not Significant
Overall	Male Female	14 29	3.97 4.03	-0.062	0.207	41	-0.301	0.765	Not Significant

t-test Results on the Difference in the Level of Competence of Advanced Cardiac Life Support (ACLS) Nurses on ICU Protocol across Civil Status

Table 5 represents the results of the t-test on the difference in the level of competency of ACLS nurses on ICU protocol across the civil status. The computed t-value of -2.04 with a significance value of 0.048 along with professional competency indicates significant results and leads to the rejection of the null hypothesis. It means that married ACLS nurses have a significantly higher competency in ICU protocol and professional ability than single nurses.

There is no significant difference in the level of competency of ACLS nurses across civil status, including technical competence, communication, relational, and mental ability. It means that the level of competence of the nurses was comparable, and civil status did not cause variation in this area. The study of Cruz (2017) using a self-assessment tool has shown competence was significantly associated with marital status. However, in the study of Heydari et al. (2016), marital status was not associated with competence.

Table 5. t-Test Results on the Difference in the Level of Competence of Advanced Cardiac Life Support (ACLS) Nurses on ICU Protocol across Civil Status

Aspect	Civil Status	N	Mean	Mean Difference	Standard Error Difference	df	t-value	Sig	Remarks
Technical Competence	Single Married	30 13	3.82 4.12	-0.295	0.203	41	-1.454	0.154	Not Significant
Professional Competence	Single Married	30 13	3.86 4.28	-0.420	0.206	41	-2.040	0.048	Significant
Communication	Single Married	30 13	3.97 4.18	-0.215	0.235	41	-0.913	0.366	Not Significant
Relational and Cognitive	Single Married	30 13	3.99 4.35	-0.356	0.242	41	-1.473	0.148	Not Significant
Overall	Single Married	30 13	3.91 4.23	-0.321	0.205	41	-1.846	0.125	Not Significant

t-Test Results on the Difference in the Level of Competence of Advanced Cardiac Life Support (ACLS) Nurses on ICU Protocol across Highest Educational Attainment

Table 6 displays the difference in the level of competency of the ACLS nurses on ICU protocol across the highest educational attainment. It reflects insignificant results through the computed t-values, which have generated significance values more elevated than the set.05 level of significance. It implied that the educational attainment of the nurses does not cause any variation in their level of competence in ICU protocol along with technical, professional, communication, relational and mental competence. Abas and Soliman's (2020) study, the nurse's performance in pretest significantly increased in the male gender with a mean performance of 55.2 ± 13.2, and the mean performance increased concerning academic level master's in nursing with a mean 75.0 ± 23.5, likewise the participants they received previous training program in BLS more competently in the pretest performance with 73.1± 10.8.

In addition, most studied groups had competent performance regarding ACLS in the posttest with a significant relation with academic qualifications (master's degree) ($f = 3.796$, $p = 0.011$). In the same line, El-Meanawi (2015) noted that only 39.6% of the respondents had participated in a CPR training course during the last 6 months before the study. Furthermore, reported that a significant correlation was found between the level of education and performance, as the highest performance mean score (238.7±24.5) was presented by bachelor's degree nurses concerning the level of education p value = <0.05. This finding was in agreement with Bukiran et al. (2014), who mentioned that the cardiopulmonary resuscitation skills of the registered nurses were poor during the pre-test, and no one could pass the essential skills. Also, the finding shows that nurses can demonstrate significant improvement in their performance rates after training when one

compares their initial results in the pre-test with the results obtained in the post-test. The current study showed that significant correlation between the studied nurse's mean difference in knowledge and performance regarding ACLS Pre and post-guideline implementation (p = 0.000). Fathy et al. (2018) they noted that there was a statistically significant difference between nurses' total practice of CPR throughout the intervention (p<0.05).

Table 6. t-Test Results on the Difference in the Level of Competence of Advanced Cardiac Life Support (ACLS) Nurses on ICU Protocol across Highest Educational Attainment

Aspect	Highest Educational Attainment	n	Mean	Mean Difference	Standard Error Difference	df	t-value	Sig	Remarks
Technical Competence	Bachelor's Degree	42	3.91	0.214	0.634	41	0.338	0.737	Not Significant
	Master's Degree	1	3.70						
Professional Competence	Bachelor's Degree	42	3.97	-0.426	0.655	41	-0.650	0.519	Not Significant
	Master's Degree	1	4.40						
Communication	Bachelor's Degree	42	4.03	-0.271	0.722	41	-0.376	0.709	Not Significant
	Master's Degree	1	4.30						
Relational and Cognitive	Bachelor's Degree	42	4.10	-0.105	0.756	41	-0.139	0.890	Not Significant
	Master's Degree	1	4.20						
Overall	Bachelor's Degree	42	4.01	-0.144	0.643	41	-0.224	0.824	Not Significant
	Master's Degree	1	4.15						

t-Test Results on the Difference in the Level of Competence of Advanced Cardiac Life Support (ACLS) Nurses on ICU Protocol across Position

Table 7 shows the difference in the level of competency of ACLS nurses on ICU protocol across positions. The computed t-value with a significance value higher than the set 0.05 level of significance suggests accepting the null hypothesis. There is no significant difference in the level of competence of the nurses in ICU protocol when grouped according to positions. It means the perception of the ACLS nurses on their level of competency on ICU protocols was comparable as rated by their head nurses/supervisors. Komeili-Sani et al. (2013) mentioned in their study that greater work experience will result in greater proficiency, and so, competency and mastery. According to Numminen et al. (2016), the ability of nursing managers to create and maintain positive working environments can promote novice nurses' professional growth.

In addition to this, Mustafaei Najaf-Abadi and Rezaei (2018) emphasized that changes in nurses' working conditions may improve nurses' health-related lifestyles and may improve professional development. According to the results, nurses with more working hours per month reported lower competence. It seems that due to the nursing shortage in Iran, although young and novice nurses do have sufficient competence, they have to work a lot of working hours per month. Nurses with a high level of work experience and competence are usually in managerial positions such as head nurses and supervisors and work fewer hours per month. This reality can threaten the quality and safety of nursing care for patients.

Table 7. Test Results on the Difference in the Level of Competence of Advanced Cardiac Life Support (ACLS) Nurses on ICU Protocol across Position

Aspect	Position	N	Mean	Mean Difference	Standard Error Difference	df	t-value	Sig	Remarks
Technical Competence	ICU Nurse	40	3.87	-0.563	0.365	41	-1.543	0.131	Not Significant
	Head Nurse	3	4.43						
Professional Competence	ICU Nurse	40	3.92	-0.878	0.365	41	-2.405	0.021	Not Significant
	Head Nurse	3	4.80						
Communication	ICU Nurse	40	4.00	-0.500	0.421	41	-1.188	0.242	Not Significant
	Head Nurse	3	4.50						
Relational and Cognitive	ICU Nurse	40	4.06	-0.576	0.438	41	-1.314	0.196	Not Significant
	Head Nurse	3	4.63						
Overall	ICU Nurse	40	3.97	-0.628	0.368	41	-1.708	0.095	Not Significant
	Head Nurse	3	4.59						

ANOVA Results on the Difference in the Level of Competence of Advanced Cardiac Life Support (ACLS) Nurses on ICU Protocol Across Number of Years Assigned in the ICU

Table 8 shows the results of the analysis of variance (ANOVA) on the difference in the competency level of the ACLS nurses on ICU protocols across the number of years of assignment in the ICU. The computed t-values have corresponding significance values higher than the set 0.05 level of significance. It concludes the probability of acceptance of

the null hypothesis. Hence, there is no significant difference in the level of competence of the nurses across the length of an assignment in the ICU. It means that their length of stay as ICU nurses had no effect on their technical, professional, communication, relational, and mental competence when it came to ICU protocols.

Fathy et al. (2018) mentioned that nurses' knowledge was competent in the pretest in the intensive care unit and coronary care unit areas of assignment with a mean of 55.812.0 and 59.211.2 respectively. Further, as testified by the study of Abassa and Soliman (2020) about years of experience, the less than half-studied groups (34.0%) have 5 years. This is explained by the fact that younger nurses were freshly graduated, more interested and motivated, and much more active than the older ones in these areas.

Table 8. ANOVA Results on the Difference in the Level of Competence of Advanced Cardiac Life Support (ACLS) Nurses on ICU Protocol Across Number of Years Assigned in the ICU

	Source of Variation	Sum of Squares	Df	Mean Squares	F-value	Sig	Remarks
Technical Competence	Between Groups	0.341	2	0.170	0.432	0.652	Not Significant
	Within Groups	15.795	40	0.395			
	Total	16.136	42				
Professional Competence	Between Groups	1.013	2	0.507	1.238	0.301	Not Significant
	Within Groups	16.366	40	0.407			
	Total	17.379	42				
Communication	Between Groups	0.847	2	0.424	0.843	0.438	Not Significant
	Within Groups	20.110	40	0.503			
	Total	20.958	42				
Relational and Cognitive Competence	Between Groups	0.492	2	0.246	0.439	0.647	Not Significant
	Within Groups	22.398	40	0.560			
	Total	22.890	42				
Overall Level of Competence	Between Groups	0.613	2	0.307	0.768	0.471	Not Significant
	Within Groups	15.963	40	0.399			
	Total	16.576	42				

ANOVA Results on the Difference in the Level of Competence of Advanced Cardiac Life Support (ACLS) Nurses on ICU Protocol Across Number of Trainings Attended

Table 9 displays the distinction in the level of competency of ACLS nurses across the quantity of coaching hours associated with the social unit protocols. The computed T-values generated significant values over the set 0.05 level of significance. It suggests acceptance of the null hypothesis that there exists no distinction between the level of competency of the nurses across the number of activities attended. It means that the items of coaching attended by the nurses were associated with social unit protocols. It did not cause any variation in their level of competency in technical, professional, communication, relational, and psychological competence. This affirms with the study of Karami et al. (2017) that the results of Spearman's coefficient revealed no statistically significant correlation between the professional competency of the nurses and their organizational commitment (F = 0.02, p = 0.74).

Table 9. ANOVA Results on the Difference in the Level of Competence of Advanced Cardiac Life Support (ACLS) Nurses on ICU Protocol Across Number of Trainings Attended

	Source of Variation	Sum of Squares	Df	Mean Squares	F-value	Sig	Remarks
Technical Competence	Between Groups	0.604	3	0.201	0.506	0.681	Not Significant
	Within Groups	15.532	39	0.398			
	Total	16.136	42				
Professional Competence	Between Groups	1.477	3	0.492	1.207	0.320	Not Significant
	Within Groups	15.902	39	0.408			
	Total	17.379	42				
Communication	Between Groups	1.171	3	0.390	0.769	0.518	Not Significant
	Within Groups	19.787	39	0.507			
	Total	20.958	42				
Relational and Cognitive Competence	Between Groups	1.103	3	0.368	0.658	0.583	Not Significant
	Within Groups	21.786	39	0.559			
	Total	22.890	42				
Overall Level of Competence	Between Groups	0.897	3	0.299	0.744	0.532	Not Significant
	Within Groups	15.679	39	0.402			
	Total	16.576	42				

Therefore, the increasing scores in professional competency did not have any effect on the increased scores in organizational commitment. However, there was a significant but weak relationship between normative commitment and interpersonal relationship dimensions (F = 0.13, p = 0.04) as well as professional development (F = 0.18, p = 0.006). Furthermore, the affective commitment had a statistically insignificant and direct relationship with clinical care (F = 0.18, p = 0.007). There was likewise no significant correlation between other dimensions of professional competency and organizational commitment.

Relationship Between the Level of Competence of Advanced Cardiac Life Support (ACLS) Nurses on ICU Protocol and their Profile variables

Table 10 presents the relationship between the extent of competency of the ACLS nurses on social unit protocols and their profile variables. Levels of significance were determined throughout the study. A Pearson correlation was utilized to search for the numerous relationships between the ACLS nurses' level of competency and the profile in terms of age, sex, civil status, highest educational attainment, position, number of years assigned in ICU, and number of trainings and pieces of training attended.

It was noted that an efficient relationship exists between skilled competence and civil status. Nurses become more competent in their professional aspects as they marry. A significant relationship exists between professional competency and rank. A positive r-value suggests that the higher the position, the higher the level of competency. This is in line with Fathy et al. (2018), 3 who reveals a the significant difference between the competence of knowledge and nurses they had received in previous training programs ($p<0.05$). On the other hand, they noted that the age group between 30–35 years had no competent knowledge and there was a non-significant association between the nurses' knowledge of cardiopulmonary resuscitation procedures and their gender. This result contradicted Elazazay et al. (2012), and Robin et al. (2011) results indicated that there was a non-significant association between the nurses' knowledge of cardiopulmonary resuscitation procedures and their years of work experience at a p-value = 0.05.

The rest of the variables were detected to indicate no critical relationship with the indicated competence areas on social unit protocols, mainly technical, professional, communication, and relational/mental competence areas.

Table 10. Relationship Between the Level of Competence of Advanced Cardiac Life Support (ACLS) Nurses on ICU Protocol and their Profile variables

	A		B		C		D		E	
Profile Variable	**r-value**	**sig**	**r-value**	**Sig**	**r-value**	**Sig**	**r-value**	**sig**	**r-value**	**Sig**
Age	0.054	0.731	0.140	0.369	0.051	0.748	0.055	0.726	0.079	0.612
Sex	-0.087	0.581	0.092	0.560	0.056	0.721	0.100	0.524	0.047	0.765
Civil Status	0.221	0.154	**0.304***	0.048	0.141	0.366	0.224	0.148	0.238	0.125
Highest Educational Attainment	-0.053	0.737	0.101	0.519	0.059	0.709	0.022	0.890	0.035	0.824
Position	0.234	0.131	**0.352***	0.021	0.182	0.242	0.201	0.196	0.258	0.095
Number of Years Assigned in ICU	0.110	0.483	0.219	0.158	0.130	0.405	0.083	0.595	0.144	0.355
Number of Trainings Attended	-0.043	0.786	-0.152	0.330	-0.211	0.174	-0.164	0.293	-0.156	0.316

***Significant at .05 level**

Legend:

A - Technical Competence
B - Professional Competence
C - Communication
D - Relational and Cognitive Competence
E - Overall Level of Competence

Enhanced Capability Program for Advanced Cardiac Life Support (ACLS) Nurses

Based on the findings of the study, some competencies have not been met competently by the respondents. For this reason, a capability program is needed to develop skills necessary for the performance of duties. The importance of skills development for nurses is that prime performing organizations acknowledge the importance of skill development plans for new and incumbent nurses. The importance of

lifelong learning and methods designed to push areas of improvement for nurses like patient care and population health were highlighted.

Several organizations across the continuum of care acknowledged nurses' ability and satisfaction with patient care and outcomes. This makes it imperative that nurses anticipate professional development throughout their careers and think of extended learning to be a part of healthy work environments.

At times brought by the COVID-19 pandemic, healthcare leaders will lose sight of the significant role professional development plays as a network for nurses. It becomes essential in times like this for organizations to ensure their workers have much-needed support to produce safe and effective care, particularly once faced with a pandemic and managing a crisis. Professional development plays a vital role in providing opportunities for managing new sickness processes and complicated patient populations. Organizations will promote learning opportunities concerning self-care and avoiding burnout, particularly during a crisis. It was in this context that this capability program was proposed to improve medical care unit (ICU) protocol. Anchored on the result of the investigation, this capability program aims to handle the gaps described above and supply the mandatory interventions. This also aims to boost the ACLS nurses' competence in ICU protocols across the areas as mentioned above. (See Appendix A. Training Matrix)

CONCLUSIONS

From the salient findings, the profile variables of respondents show variability in the age and frequency level, thus offering a more precise description of the level of competency of ACLS nurses along with the different competencies. It also implies that the level of competency of ACLS nurses was competent along with the following ACLS protocols like technical, professional communication, and cognitive areas of competence in ICU protocols, namely technical, professional communication, and mental relations. Further, it showed no significant difference across respondents' profile variables such as age, gender, civil status, educational attainment, position, number of years assigned in the ICU, and the pieces of training attended. Moreover, there is a significant relationship between professional competence, civil status, and work. The results of this study suggest that nurses in the field should give particular attention to their competencies to improve their performance, specializing in ACLS, to give primordial care to their patients.

RECOMMENDATIONS

Based on this study, it is hereby recommended that further studies on other variables affecting the level of competence should be given consideration. It is also emphasized that skills and training should be given priority for the full development of the competency of ICU nurses. In addition to this, developing an excellent plan of activities should be given priority during strategic planning and, likewise, prioritizing ICU

nurses since they are assigned to patients during crucial medical situations. Further, a comparative study between rural and urban hospitals should consider dealing with the existing issues, skills, trends, and other factors relevant to ICU competencies. Besides, implemented policies, guidelines, and standard protocols should be reviewed, analyzed, and revised.

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Appendix A

Proposed Training Program to Improve the Competence of ACLS Nurses

General Objectives: This training program enables ACLS nurses to improve their competence to be equipped with knowledge and skills to gear with 21st - century nursing abilities.

Area	Objectives	Activities	Strategies	Persons Involved	Budget	Expected Outcome
Technical Competence						
Provide holistic care to patients with renal failure, peritoneal dialysis	Formulate a plan of care for patients with renal failure: Peritoneal Dialysis. Implement a safe and quality interventions with the client with renal failure: Peritoneal Dialysis Provide a health program for patients with a client with renal failure: Peritoneal Dialysis	1. Conduct lectures about caring for patients with renal failure: Peritoneal Dialysis 2. Undergo training conducted by RENAP (Renal Nurses Association of the Philippines) 3. Conduct a webinar regarding the Proper Management of Peritoneal Dialysis.	• A detailed discussion of concepts of Renal Failure: Peritoneal Dialysis • Clinical Simulation of Patient with Renal Failure • Return Demonstration of Skills related to Peritoneal Dialysis • Online Video Conferencing • Provision of Skills Checklist • Provision of Nursing Care Plan • Care Guide for Patients with Renal Failure: Peritoneal Dialysis	• ICU nurses • Nephrologists – Resource Speaker • CNN – Resource Speaker	P3,000.00 to P5,000.00 (USD 50 to 100)	The ICU Nurse will demonstrate improved care for patients with renal failure: Peritoneal Dialysis The ICU Nurse will implement safe and quality interventions for patients with renal failure by utilizing a checklist. The ICU Nurse will provide a health program for patients with renal failure: Peritoneal Dialysis by implementing Care Plans and the Care Guide provided.
Demonstrate burn assessment, burn resuscitati	Integrate proper burn assessment and wound care, burn	1. Conduct lectures about burn assessme	• A detailed discussion of concepts of Burn Assessment	• ICU Nurses • Burn Unit Nurses – Resource Speaker/	P3, 000.00 to P5,000.00 (USD 50 to 100)	The ICU nurses will be able to integrate proper burn

on such as airway breathing and circulation, and burn wound care.	resuscitation such as airway breathing and circulation, and wound care. Adhere to protocols and principles of burn assessment and wound care, burn resuscitation such as airway breathing and circulation, and wound care. Institute appropriate corrective actions on burn assessment and wound care, burn resuscitation such as airway breathing and circulation, and wound care.	nt, burn resuscitation such as airway breathing and circulation, and burn wound care. 2. Facilitate training on burn assessment, burn resuscitation such as airway breathing and circulation, and burn wound care. 3. Conduct webinars regarding burn assessment, burn resuscitation such as airway breathing and circulation, and burn wound care.	and Burn Resuscitation. • Clinical Simulation of Burn Assessment and Burn Resuscitation • Return Demonstration of Skills related to Burn Assessment and Burn Resuscitation • Online Video Conferencing • Provision of Skills Checklist • Provision of Nursing Care Plan • Care Guide for Burn Assessment and Burn Resuscitation	Proctor • General Surgeon – Resource Speaker		assessment and burn resuscitation into Clinical Practice. The ICU and its personnel will create and utilize Standardized Protocols and Principles. The ICU nurses will be able to institute appropriate corrective actions on burn assessment and wound care and burn resuscitation.
Communication Competence						
Anticipates possible changes/complications associated with a particular disease	Document client's responses/ nursing care services rendered, possible complication	1. Review Handbook on complications associated with a particular	• A detailed discussion of concepts of Changes/ Complications associated with a particular	• ICU Nurses • ICU Head Nurse • Intensivist – Resource Speaker • Other	P3, 000.00 to P5,000.00 (USD 50 to 100)	The ICU nurse developed skills in treatment procedures for complications of particular

and/or treatment procedures.	s associated with particular disease and/or treatment procedure. Ensure completeness, integrity, safety, accessibility, and security of information. Provide appropriate evidence-based nursing care using a participatory approach based on theories and standards	disease and/or treatment procedures. 2. Facilitate Scheduled lectures with workshops for ICU Nurses regarding updates on complications associated with a particular disease and/or treatment procedures. 3. Conduct Webinars for Nurses about complications associated with a particular disease and/or treatment procedures.	disease and/or treatment procedures. • Clinical Simulation of Changes/ Complications associated with a particular disease and/or treatment procedures. • Return Demonstration of Skills related to Changes/ Complications associated with a particular disease and/or treatment procedures. • Online Video Conferencing • Provision of Skills Checklist • Provision of Nursing Care Plan • Care Guide for Changes/ Complications associated with a particular disease and/or treatment procedures.	Specialists – Resource Speakers		diseases. The ICU and its personnel will create and utilize Standardized Protocols and Principles.
Professional Competence						
Participate in organizational initiatives by contributing constructiv	Apply ethical reasoning and decision-making process to address situations of ethical distress and	1. Set a weekly, or quarterly Organizational and/or Structural Meeting 2. Facilitate	• Construction of Core Group for ICU Nurses for training and development. • Initiate a Nursing Research	• ICU Nurses • ICU Head Nurse • Nurse Researcher – Facilitator • Research and Training	P15, 000.00to P25,000.00 (USD 300 to 500)	Core Group for ICU Nurses. ICU Quality Assurance Committee Research

e proposals for improvement.	moral dilemma. Maintain a positive practice environment. Provide appropriate evidence-based nursing care using a participatory approach based on theories and standards	Lectures on Quality Assurance 3. Organize a Nursing Audit focused on Proposal and Improvement 4. Participate in Nursing Research	Team • Formulate a Quality Assurance Committee for Nurses to focus on constructive proposals for improvement.	Officer		Proposal as initial output.