

## Effect of Payton's Four Step Approach on Skill Acquisition, Self-Confidence and Self-Satisfaction among Critical Care Nursing Students.

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### Abstract

**Background:** A variety of instructional approaches were used in the skill laboratory such as "see one, do one" method. Although this method still extensively used, Rodney Peyton has suggested an alternative approach, the "Four-Step Approach". This approach guarantees that the teacher divides the procedure into convenient steps, asks the learner to articulate the steps, and provides repetition to strengthen the learning and correct errors.

**Purpose:** To determine the effect of Peyton's four step approach on critical care nursing students' skill acquisition, self-confidence and satisfaction level.

**Method:** Using a quasi-experimental research design, students were taught the CPR by either the '2-stage' or 'Peyton's four step approach'. Students' skill acquisition, self-confidence and satisfaction levels were measured immediately after applying the approach, while skill retention was measured 12 weeks later.

**Results:** A convenient sample of 78 students was assigned into two equal groups "study and control" 39 students each. Highly statistically significant differences were found between the study and control groups regarding students' self-confidence and satisfaction in performing CPR procedure in the favor of Peyton's four step approach. No statistically significant difference was found between them in relation to their skill acquisition and retention.

**Conclusion:** Peyton's four-step approach is an effective clinical teaching approach that contributes in improving the critical care nursing students' self-confidence and satisfaction in performing CPR procedure.

**Keywords:** Skill acquisition and retention, self-confidence, satisfaction, cardiopulmonary resuscitation, critical care nursing students

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### I. Introduction

Nursing education is the main factor of raising the performance level of future nurses. It gives critical care nursing students the main skills that help them offer the best quality of care for patients suffering from complicated health problems. Nursing education is applied in three main settings; classroom, skill laboratories, and clinical settings<sup>(1)</sup>. Classroom instruction is used to get students ready for their clinical tasks. It offers them the essential knowledge that they will later use and test in clinical practice. The clinical setting is the place in which students practice their technical skills with a real patient for putting theories into practice<sup>(2)</sup>. Hashim et.al (2016)<sup>(3)</sup> stated that acquiring clinical skills through dealing with real patients not only threatens a patient's condition but also causes many ethical alarms. In addition, learning on a real patient can be very stressful for critical nursing students because they know that making mistakes can harm patients and affect their outcomes<sup>(4,5)</sup>. That necessitated the development of skill laboratories in which students can learn and practice different aspects of knowledge and skill in a safe environment<sup>(6)</sup>.

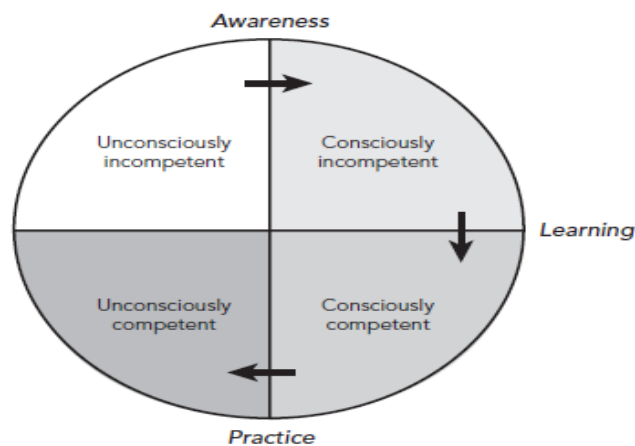
Skill laboratory is a transition setting between the classroom and clinical areas<sup>(3)</sup>. It is considered a 'mistake forgiving' learning environment where students can give care to patients without jeopardizing them or causing antagonistic effects. It lessens the anxiety experienced by students when they meet patients face to face for the first time in clinical areas especially in intensive care units<sup>(7)</sup>. It offers a safe training environment that gives students a chance to practice procedural skills on models or with each other before practicing it on real patients<sup>(6,7)</sup>.

A diversity of instructional methods was used in the skill laboratory to help students come to possess difficult technical procedures<sup>(8)</sup>. The most widely used one is the “see one, do one” method. In this method the skill is first performed and elaborated by the teacher followed by questions that are asked by students in order to gain better understanding<sup>(9)</sup>. Students later apply the skill themselves which are modified by the teacher if needed. Although the “see one, do one” method still seems to be commonly used, Rodney Payton has suggested another method<sup>(10)</sup>. This method is composed of four steps and is accordingly referred to as the “Four-Step Approach”. This approach is intended to help present new skills to students as follows:

- Step 1: *Demonstration*: The teacher performs the skill at the usual pace and with no extra comments. This step is used to offer a standard.
- Step 2: *Deconstruction*. The teacher performs the respective skill during the description of each procedural sub-step in detail. The skill should be distributed into smaller subgroups.
- Step 3: *Comprehension*. The teacher implements the skill for a third time, based on the sub steps that was explained by the learners. The description and implementation do not occur at exactly the same time.
- Step 4: *Performance*. The learner implements the skill while explaining the steps with no help from the teacher<sup>(11-15)</sup>.

Payton's 4 step approach has several advantages as it comprises the incorporation of numerous learning theories especially step three, when the student instructs the teacher, this seems to be a significant to student learning<sup>(6)</sup>. The student has to think in steps 1 and 2 first before sharing the instruction to the teacher. To think first before sharing allows students to consolidate their ideas before actively expressing them. In addition, the intellectual process called self-explanation seems to simplify the amalgamation of innovative knowledge into existing knowledge<sup>(14)</sup>. According to Dewey; reflection is a decisive step in processing new information, as it leads to defining a problem, developing a solution, and finally testing the solution by action or through experiment<sup>(16)</sup>. When students instruct their teacher (step3), that combines aspects of “learning-by-teaching” approach. This approach supposes that learning contents are reserved to a higher degree when they are effectively taught to another person. In addition, the teacher may give suggestions or corrections in case of forgetting a step or in case of incorrect or explanation by students, which will lead to better understanding. Finally, the fourth step (performance) includes an independent performance of the learned skill<sup>(13)</sup>.

Payton (1998) stated that, by following the four-step approach, students have moved from being “consciously incompetent” (realizing their inability) to being “consciously competent” (having the ability to do it with great thought) (figure1)<sup>(17)</sup>. Only with frequent practice, will students be able to perform satisfactorily in various situations. In another word, they will be confident about their performance. It was found that when students are highly confident about their skills, they will be more likely to consider these skills as important in nursing care and their commitment to use them will be increased<sup>(18)</sup>.



Stages in acquiring skills.  
Adopted from Payton<sup>(17)</sup>.

Self-confidence is an important factor in critical nursing students. Students who have self-confidence believe that they can perceive and eventually succeed in their clinical goals, whereas students having no self-confidence often imagine defeat before it happens<sup>(19)</sup>. Confident students will participate in inspiring goals, whereas their less confident peers will keep away from the same tasks. Both, capable and incapable students can undergo lack of confidence because individuals are similarly directed by their beliefs and perceptions rather than reality<sup>(20)</sup>. Conscientious clinical teachers must be aware of this phenomenon and act quickly to develop an

attitude of confidence to change a student's negative attitude; and that is what was done by the clinical teachers during applying Payton's four step approach<sup>(21)</sup>.

Emergency care nursing skills have been thought of as a factor that can influence the emergency patients' safety. Critical care nursing students must be very skillful to tackle real clinical situations efficiently and apply the training in a real situation. Therefore, it is imperative for the students to receive training in a safe environment such as skill labs before performing critical skills on real patients. One of the most fundamental emergency clinical skills is cardiopulmonary resuscitation (CPR) procedure. This procedure is considered as the most important one as a lifesaving procedure and the most anxiety provoking owing to its difficulty. In other words, to be effective, CPR procedure needs to be performed quickly and competently which will never come true if students are not confident in performing it. Critical care nursing students receive training not only to practice the emergency skills (CPR skills) technically the "what concept", but also on the way they manage the life-threatening problems non-technically the "how concept" as confidence is mandatory in emergency nursing clinical practices. In addition, students thought that, training on CPR using conventional methods was not sufficient for them to be competent and confident in performing it. This necessitates introducing an innovative clinical training approach such as Peyton's 4-step-approach to students to improve their subsequent skill performance in the lab which in turn, would positively affect their performance and confidence level in the clinical settings<sup>(22,23)</sup>. Moreover, no study was conducted till the time of the study at the Faculty of Nursing, Alexandria University about the effect of Peyton's 4-step-approach on skill acquisition, self-confidence and satisfaction level among critical care nursing students. That's why this study was conducted.

### **The aim of the study**

Is to determine the effect of Peyton's four step approach on critical care nursing students' skill acquisition, self-confidence and self-satisfaction.

### **Research hypothesis**

Students who were trained using Peyton's four step approach exhibit more skill acquisition, higher self-confidence and higher satisfaction in performing the CPR procedure than those who do not.

### **Materials**

**Tools:** Three tools were used for data collection.

#### **Tool one: "Cardiopulmonary resuscitation checklist".**

This checklist was developed by Critical Care and Emergency Department Staff<sup>(24)</sup> and adopted by the researchers to assess the students' skills in performing the cardiopulmonary resuscitation procedure using Payton's four step approach. It includes steps related to pre-procedural assessment, procedure performance, and post-procedural care. Students' interventions are measured using a dicotomus scale of done (completely or incompletely) and not done. Students' grade was out of 50.

#### **Tool two: "Self-confidence scale".**

The translated version of this scale was adapted from Morsy S (2011)<sup>(25)</sup> to be applicable for measuring critical care nursing students' confidence in performing the CPR procedure using Payton's four step approach. The scale was reliable with coefficient value (0.94). It includes five statements about the critical care nursing students' self-report of their confidence level after performing the procedure. Each statement includes 5 points Likert scale ranging from not at all certain (1) to absolutely certain for all steps (5) in which each item reflects the students' self-confidence level. The total scoring ranged from (5-25) represented as follows; low self-confidence (5-11), moderate self-confidence (12-18), and high self-confidence (19-25).

#### **Tool three: "Critical care nursing students' satisfaction questionnaire"**

This questionnaire was developed by the researchers after thorough review of related literature<sup>(26-29)</sup> to assess the critical care nursing students' satisfaction level after performing CPR procedure using Payton's four step approach. It consists of 10 items with yes (scored as 1) or no (scored as 0) answer distributed into two main categories; student related items and teaching method related items. The cut off point for "Highly satisfied" is  $\geq 75\%$  of the total score, "Satisfied" is between 50% to less than 75% of the total score, and "Not satisfied" is less than 50% of the total score.

In addition, a sheet containing critical care nursing students' personal and academic characteristics such as sex, age, academic level, previous GPA, and work condition was attached to them.

## **Method**

A quasi experimental research design was used.

This study was carried out at Critical Care and Emergency Department, Faculty of Nursing-AlexandriaUniversity. Aconvenience sample of 78 nursing students out of 300 students enrolled in the Emergency Nursing Course during the first semester of the academic year 2016-2017 were included in the current study. This sample was assigned randomly into two equal groups "study and control" 39 students for each.The sample size was selected using the following equation; Population size=300, Expected frequency=20%, Acceptable Error=10%, Confidence Coefficient=99%, Minimum sample size=78.

Permission to conduct the study was obtained from the dean of the Faculty of Nursing;AlexandriaUniversity after explaining the aim of the study.

An informed consent was obtained from critical care nursing students. It included the aim of the study, potential benefits, risks and discomforts associated with participation.The anonymity and confidentiality of responses, voluntary participation and the right to refuse to participate in the study were emphasized to critical care nursing students.

A pilot study was carried out on eight students to assess the clarity and applicability of the tools, and all necessary modifications were done. Reliability of tool three was measured using Cronbach Alpha reliability test, the coefficient value was ( $r = 0.741$ ) which is acceptable.

Data was collected by the researchers during approximately four months starting fromFebruary 2017 to May 2017.

## **Data collection:**

Critical care nursing students who were included in the study were randomly assigned through coins toss method into two equal groups, study and control (39 students for each).

The study group was divided into three subgroups; each subgroup (13 students) has been trained on three different days.

Critical care nursing students' characteristics were recorded by the researcher for **both groups**.

The study group was subjected to "Peyton's four-step approach" and the control group was subjected to the conventional method of teaching clinical skills. The same clinical instructor was responsible for performing the CPR procedure in both groups to unify the training. The clinical instructor was trained by the researcher to explain the CPR procedure using the Peyton's four-step approach.

**For the control group;** theCPR procedure was explained using the two-stage approach "see one, do one" in which the procedure was explained to the students by the clinical instructor only one time (demonstration) then they were allowed to do it independently (re-demonstration) under the instructor's supervision.

**For the study group;** each subgroup was trained to perform CPR procedure using "Peyton's four-step approach" following four sequential steps; demonstration, deconstruction, comprehension, and performance as follow:During the first step, the instructor demonstrated the procedure silently "at normal speed, and without commentary"**(Demonstration)**. Then, the instructor demonstrated the procedure while describing each step to the students **(Deconstruction)**.During the third step,the instructor demonstrated the procedure following students' instruction for each step **(Comprehension)**.Finally, students simultaneously demonstrated and described the procedure step by step **(Performance)**.

Critical care nursing students' skill acquisition of the CPR procedure (tool one) was measured twice for **both groups**; immediately after performing the procedure and after 12 weeks of it (during the final exam). Students' self-confidence was measured for both groups using tool two, immediatelyafter performing the procedure. Students' satisfaction level was measured for both groups of studentsimmediately after performing the procedure and the total score was calculated using tool three.

## **Statistical analysis**

Data were analyzed using IBM SPSS software package version 20.0. (Armonk, NY: IBM Corp).Qualitative data were described using number and percent. Quantitative data were described using range (minimum and maximum), mean, and standard deviation. Significance of the obtained results was judged at the 5% level. Chi-square test was used for categorical variables, to compare between different groups.Fisher's Exact or Monte Carlo correction was used for chi-square when more than 20% of the cells have expected count less than 5.Student t-test was used for the normally distributed quantitative variables, to compare between two studied groups. And finally, Paired t-testwhich was usedfor normally distributed quantitative variables, to compare between two periods.

## **II. Results**

**Table (I)** shows the distribution of the critical care nursing students according to their personal and academic characteristics. In relation to *age*, it was found that 51.3%of students in the study group had 19 years

old while 53.8% of them in the control group aged 18 years old. Regarding *sex*, 69.2% of students in both groups were females. As regard *GPA*, 23.1% of the study group of students had GPA of B<sup>+</sup>, B and C or less respectively. Whereas, 30.8% of the control group of students had GPA of B. In relation to the work status, about half of the students in both groups had no work during the time of the study (51.3%, 61.5% respectively)

**Table (II)** shows comparison between the study group skill acquisition levels immediately after and after 12 weeks of performing CPR procedure using Payton 4 step approach. It reveals that the mean  $\pm$ SD of students' skill acquisition immediately after performing CPR procedure was 8.58 $\pm$ 1.18 compared to 8.77 $\pm$ 0.76 after 12 weeks of performing it. Furthermore, no statistically significant difference was noted between the students' skill acquisition immediately after performing CPR procedure and 12 weeks after performance (P=0.286).

**Table (III)** presents comparison between the control group skill acquisition levels immediately after and after 12 weeks of performing CPR procedure. It was observed that the mean  $\pm$ SD for the skill acquisition immediately after performing CPR procedure was 8.68 $\pm$ 1.05 compared to 8.69 $\pm$ 1.08 after 12 weeks of performing it. Furthermore, no statistically significant difference was noted between the students' skill acquisition immediately after performing CPR procedure and 12 weeks after performance (P=0.965).

**Table (IV)** reflects that there were no statistically significant differences between the study and control groups related to the skill acquisition of CPR procedure immediately after (P=0.686) and after 12 weeks of performing it (0.700).

**Table (V)** describes the comparison between the study and control groups according to students' self-confidence levels after performing CPR procedure. It was noted that more than three quarters (76.9%) of the students in the study group compared to only 53.8% of them in the control group were highly confident in performing CPR procedure after using Payton's 4 step approach with a statistically significant difference between them. (P=0.032).

**Table (VI)** reflects the comparison between the study and control groups according to students' satisfaction level after performing CPR procedure. It was observed that most of the students (79.5%) in the study group were highly satisfied after performing CPR procedure using Payton's 4 step approach. Meanwhile, most of them in the control group (76.9%) were moderately satisfied with the traditional method of training. However, there was a highly statistically significant difference between the two groups regarding their satisfaction levels after performing CPR procedure using Payton's 4 step approach (P=0.000).

**Table (I): Frequency distribution of studied groups according to their personal and academic characteristics**

Characteristics		Groups				Total N=78		Significance
		Study N=39		Control N=39		Count	%	
		Count	%	Count	%			
Age	18	15	38.5	21	53.8	36	46.2	X <sup>2</sup> =2.059 P=0.357
	19	20	51.3	14	35.9	34	43.6	
	20	4	10.3	4	10.3	8	10.3	
Sex	Female	27	69.2	27	69.2	54	69.2	-----
	Male	12	30.8	12	30.8	24	30.8	
GPA	B+	9	23.1	7	17.9	16	20.5	X <sup>2</sup> =0.907 P=1.017
	B	9	23.1	12	30.8	21	26.9	
	B-	8	20.5	6	15.4	14	17.9	
	C+	4	10.3	4	10.3	8	10.3	
	C or less	9	23.1	10	25.6	19	24.4	
Work Status	No	20	51.3	24	61.5	44	56.4	-----
	Yes	19	48.7	15	38.5	34	43.6	

X<sup>2</sup>Chi-Square test

\*Significant at P $\leq$ 0.05

**Table (II): Comparison between the study group's skill acquisition levels immediately after and after 12 weeks of performing CPR procedure using Payton 4 steps approach.**

Skill acquisition	Study group N=39		
	Mean	Std. Deviation	t-test P value
Immediately after	8.58	1.18	1.082 0.286
After 12 weeks (retention)	8.77	0.76	

t student's independent samples t test  
**Significant** at  $P \leq 0.05$

**Table (III): Comparison between the control group's skill acquisition levels immediately after and after 12 weeks of performing CPR procedure.**

Skill acquisition	Control group N=39		
	Mean	Std. Deviation	t-test P value
Immediately after	8.68	1.05	0.044 0.965
After 12 weeks (retention)	8.69	1.08	

t student's independent samples t test  
**Significant** at  $P \leq 0.05$

**Table (IV): Comparison between the study and control groups according to skill acquisition immediately after and after 12 weeks of performing CPR procedure.**

Skills acquisition	Group	N	Mean	Std. Deviation	t-value	P
Immediately After	Study	39	8.58	1.18	0.406 0.686	
	Control	39	8.68	1.05		
After 12 weeks (retention)	Study	39	8.77	0.76	0.386 0.700	
	Control	39	8.69	1.08		
Difference between skill acquisition & retention	Study	39	0.19	1.13	0.628 0.532	
	Control	39	0.01	1.45		

student's independent samples t test **Significant** at  $P \leq 0.05$

**Table (V): Comparison between the study and control groups according to students' self-confidence levels after performing CPR procedure.**

Confidence Level		Groups		Total	X <sup>2</sup> P
		Study	Control		
High	No	30	21	51	4.588 0.032*
	%	76.9	53.8	65.4	
Moderate	No	9	18	27	
	%	23.1	46.2	34.6	
Total	No	39	39	78	
	%	100.0	100.0	100.0	

X<sup>2</sup>Chi-Square test **\*Significant** at  $P \leq 0.05$

**Table (VI): Comparison between the study and control groups according to students' satisfaction level after performing CPR procedure.**

Satisfaction level		Groups		Total	X <sup>2</sup> P
		Study	Control		
High	No	31	9	40	24.837 0.000*
	%	79.5	23.1	51.3	
Moderate	No	8	30	38	
	%	20.5	76.9	48.7	
Total	No	39	39	78	
	%	100.0	100.0	100.0	

X<sup>2</sup>Chi-Square test \*Significant at P≤0.05

### III. Discussion

Skill lab is a safe learning environment where students can learn skills that cannot be learned in practice. Through this safe environment, critical care nursing students can learn, make mistakes, and practice psychomotor skills such as CPR procedure<sup>(6,7)</sup>. Peyton's 4 step teaching approach is one of the strategies that was used by many researchers such as Münster et al (2016)<sup>(13)</sup>, Nikendei et al (2014)<sup>(14)</sup>, and Gradl-Dietsch et al (2016)<sup>(30)</sup> for many reasons. It permits progressive instruction approach; provides high levels of teacher-student interaction and addressing all types of learning styles.

The current study revealed that there was no significant difference between the study and control groups as regards critical care students' characteristics. They were over eighteen years old with GPA of B. Concerning the skill acquisition and retention of CPR procedure, the result of this study displays that no statistical significant differences existed between the critical care nursing students' skills acquisition and retention neither within each studied group (study or control) nor between both of them. This result may be attributed to the time of data collection was the same time of the students' final exam, which indicates studying the procedure at the same time from both groups of students, thus no differences were observed.

In congruence with the current findings, Jenko et al (2012)<sup>(31)</sup> compared the 2-stage approach with the 4- stage one in teaching BLS technique and they found that there was no significant improvement in the quality of chest compressions using the Peyton 4 step teaching approach. Sopka et al (2012)<sup>(32)</sup> tested the quality of external chest compression within the basic life support (BLS) using the 4-step approach in comparison with media supported 4-step approach. They found no difference between the two methods neither after one week nor after 6 months. Moreover, Münster et al (2016)<sup>(13)</sup> made a comparison between three methods on training of external chest compression with a cardiopulmonary resuscitation training device. They used Peyton's 4-step-approach for one group, Peyton's 4- step-approach without Step 3 for the second group and the 2-stage "see one, do one" for the third group. They found no differences in the training performed by medical students regarding Peyton and Non-Peyton methods.

In 2017, Frangež et al<sup>(33)</sup> used the 4-stage approach to test the effectiveness of the approach in medical students' acquisition of BLS skills as they were tested directly after the training. In contrast with the findings of the current study, Frangež et al showed that there was an enhancement in the efficiency of numerous steps of the BLS process using the 4-stage approach.

Away from BLS, Romero et al (2017)<sup>(34)</sup> made a comparison between the effectiveness of "see one, do one, and teach one" Halsted's method and the Peyton's Four-Step Approach for training medical students the intra-corporal suturing and knot tying. In contrast to this study, they found that, Peyton's group scores differed significantly from the other group. Krautter et al (2011)<sup>(10)</sup> compared in a randomized controlled trial the Peyton's Four-Step Approach with the standard method in training students of gastric tube placement. They found that using Peyton's Four-Step Approach is surpassing the standard method concerning the professionalism and communication, in addition to faster implementation for the first time of students' re-demonstration.

Self-confidence is another measured variable in the current study. Self-confidence is a factor that can have its influence on the fast, appropriate origination and competence of the critical nursing interventions. Confident critical care students always have more initiative and are ready to learn and improve<sup>(35,36)</sup>.

The present study reveals that most of the students in the study group were highly confident in performing CPR procedure using Peyton's Four-Step Approach while most of them in the control group were moderately confident with a statistical significant difference between the two groups in favor of the study group. Students in the study group reported that they were confident in three incidents; immediately after re-demonstrating the procedure using Payton approach, while performing the procedure during the exam, and during the performance of the procedure in the real situation. This result may be related to students' observation,

demonstration and repetition of the procedure steps that occur during the application of Peyton's Four-Step Approach. Finally, students performed the procedure while commenting on each step which increased their independent performance, learning by teaching, and active participation. All of these qualities can contribute to supporting and reinforcing students' good performance, and make them confident about their performance of the procedural steps. Moreover, patterns of behavior that have a negative effect on students' confidence such as getting embarrassed from students' own mistakes in front of others had never existed while using this approach. Additionally, students' self-confidence may be enhanced because they observed the procedure performed in front of them more than one time and for their active participation along the process of training. This technique which allows repetition, and the control of the occurrence of mistakes can raise the students' self confidence level.

Furthermore, there are a small number of studies that were interested in focusing on assessing the students' self-confidence level with the Peyton's Four-Step Approach. In line with the current study, Jenko et al (2012)<sup>(31)</sup> tested the self-evaluation of the students before the course of BLS using the 4-stage technique. However, the students were highly confident about their knowledge level after the course. Moreover, McCabe et al (2016)<sup>(36)</sup> gave proof in a study which measured the students' self-confidence in a high-dose simulation clinical teaching model. They found that there was a raise in students' self-confidence level which supports the effectiveness of the model used depending on self-confidence as an important indicator of students' ability to perform effectively in new situations.

In contrast with the finding of the current study, Sopka et al (2012)<sup>(32)</sup> tested the students' self-confidence using questionnaires concerning the knowledge of BLS algorithm and external chest compression performance before and after training using media-supported 4-step approach. The result revealed that no significant difference was found between the students' confidence before and after the application of the approach.

Students are the outcome of educational organizations; therefore, their satisfaction is thought of as an important indicator for the quality of service. The current study puts an emphasis on the students' satisfaction level with the Peyton's Four-Step Approach as a new training strategy used in training the critical care nursing students.

The current study shows the existence of a statistical significant difference between the two groups of students concerning their satisfaction level. It was noticed that most of the students in the study group were very impressed and highly satisfied with Peyton's Four-Step Approach in training of CPR skill. This impression may be attributed to the fact that using this approach in training can affirm the skill acquisition; facilitate the memorization of the explanation, and demonstration of the procedure. Demonstrating the skill in a silent manner without commentary (stage I) made students more determined to critically appraise what is done and attract their attention for a long period of time. Moreover, this approach helped to make students apply the skill in an organizing manner and reduced the time spent to study the procedure at home as reported by the students themselves. Furthermore, Payton approach allowed the instructor to divide the procedure into convenient steps, and made students observe its performance 4 times which provides repetition to enhance students' learning and correct their mistakes. They were also satisfied because of the teacher's role performed by the students in stage 3. Acting as a teacher helps learning by experience and valuing students' information. This result was in accordance with the clinical controlled trial done by Krautter et al (2011)<sup>(10)</sup> to judge the effects of Peyton's Four-Step Approach on objective performance measures in technical skills training. They tested the acceptance rate for two approaches and found that both methods were a stimulus to the students, however, Peyton's Four-Step Approach was valued as more coherent and easier to shadow.

Gratl-Dietsch et al (2016)<sup>(30)</sup> determined in a randomized trial to measure the impact of Peyton's Four-Step Approach for training spinal manipulation techniques that although both methods show equivalent skill retention, the method of Peyton's Four-Step Approach was appropriate and well accepted by trainees. As well, the study of Sopka et al (2012)<sup>(32)</sup> who compared a Peyton's Four-Step Approach with the newly approach of media-supported 4-step in training resuscitation skills verified that using media-supported 4-step was not only practicable, but also acknowledged by students. Nikendei et al (2014)<sup>(14)</sup> tested the effectiveness of using the modified Peyton's Approach in training small groups of students. Furthermore, the study examined the subjective impressions of students and tutors using self-report, rating scale, and semi-structured interviews. The study revealed that the students were satisfied with the used approach, and was rated as easy comprehended, resulting in a good flow of practicing and it drew students' attention. At the interview they expressed a positive feedback concerning the modified Peyton's approach in which they practiced the training using this method as an important learning experience. In conclusion of a controlled trial by Krautter et al (2011)<sup>(10)</sup>, they emphasized that the Peyton's Four-Step Approach was not only superior to the ordinary approach in practical skills training, but it was also a well-accepted method of training for students.



#### IV. Conclusion

Based on the finding of the current study it can be concluded that Peyton's four-step approach is an effective clinical teaching approach that contributes to improving the critical care nursing students' self-confidence and satisfaction in performing the CPR procedure. In addition, it had no effect on their skill acquisition and retention.

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