

## A qualitative study of effectiveness of clinical teaching

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**Abstract:** Clinical experience has been always an integral part of nursing education. It prepares student nurses to be able of "doing" as well as "knowing" the clinical principles in practice. Clinical experience is one of the most anxiety producing components of the nursing program which has been identified by nursing students. The educational process is unique in the practice professions because being able to perform the activities of the profession in live situations as opposed to simply being able to express understanding of principles is a requisite competency of graduation. Despite a wealth of research on clinical teaching, the criteria for determining what constitutes effective clinical teaching remain poorly defined. Therefore, the aim of this study is to investigate the nursing students' and instructors' perception of clinical teaching effectiveness in critical care nursing courses. Material and Method; A descriptive qualitative research design was used. Setting: The study was conducted at the Critical Care & Emergency Nursing Department, Faculty of Nursing, Alexandria University. Subjects: consisted of two groups. The first group included nursing students and the second group consisted of critical care clinical instructors. Clinical Teaching opinionnaire tool was developed to elicit the nursing student's / clinical instructors' perception of clinical teaching effectiveness in critical care nursing courses. Results; Students had enough orientation. Students are under stress because of a lot of work and duties. The ratio of instructors to students (1:6) is adequate. The instructors' agreed with the students on the duration of clinical training is not enough. Students are well oriented with the intended learning outcomes (ILOs) of their clinical training. Students and instructors enjoyed OSCE. Students and instructors don't like portfolio and log book. Students like their clinical instructors they see them role models Conclusion; the findings of this study and the literature support the need to rethink about the clinical skills training in nursing education. Recommendation; Longitudinal studies to investigate the nursing students' and instructors' perception of clinical teaching effectiveness in randomly selected multiple faculties are recommended.

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### 1. Introduction:

Nursing is a professional discipline. A professional is an individual who possesses expert knowledge and skills in a specific domain, acquired through formal education in institutions of higher learning and through experience, and who uses that knowledge and skills on behalf of society by serving specified clients. Professional disciplines are differentiated from academic disciplines by their practice component. Clinical practice requires critical thinking and problem-solving abilities, specialized psychomotor and technological skills, and a professional value system. Practice in clinical settings exposes students to realities of professional practice that cannot be conveyed by a textbook<sup>(1)</sup>. Clinical experience has been always an integral part of nursing education. It prepares student nurses to be able of "doing" as well as "knowing" the clinical principles in practice<sup>(2)</sup>. The educational process is unique in the practice professions because being able to perform the activities of the profession in live situations as opposed to simply being able to express understanding of principles is a requisite competency

of graduation<sup>(3)</sup>. Despite a wealth of research on clinical teaching, the criteria for determining what constitutes effective clinical teaching remain poorly defined<sup>(4)</sup>.

The complexity of patient care, the vulnerability of the patient and family, and the controversies surrounding best practices in education make teaching critical care content to students in nursing a challenge for faculty<sup>(5)</sup>. The American Association of Colleges of Nursing heralded the identification of essential content for both undergraduate and graduate education in nursing in the mid-1980s as major curricular reform and has continued to revise these widely used documents. In addition, the American Association of Critical-Care Nurses (AACN) published a document that encouraged selection of critical care content to meet competencies at the undergraduate and graduate level<sup>(5)</sup>.

The critical care nursing undergraduate curriculum in Alexandria University is designed to ensure that the theoretical and clinical practice requirements are met at appropriate levels throughout

the 3 critical care nursing courses { Emergency Nursing, Critical Care Nursing I and Critical Care Nursing II}. Emphasis in the emergency nursing course is placed on the prioritization and decision making processes of nursing care and the nursing responsibilities associated with diagnostic studies, emergency nursing procedures, evaluation of outcomes, health promotion and support for individuals and families experiencing acute health problems. Collaboration with interdisciplinary health professionals in health restoration is fostered. Clinical experiences are offered in nursing skill lab and emergency units<sup>(6)</sup>.

Critical care nursing I course is designed to assist students in developing expertise and in-depth knowledge in the field of critical care nursing. Students will be able to provide the foundation skills in caring for critically ill patients/family in collaboration with the other health team members. It enables them to function as educators, leaders and researchers in the field of critical care nursing. The critical care nursing II course which is the third course focuses on the application of nursing process and problem-solving approach in providing nursing care to critically ill patients. Knowledge and skills developed through the course should enable students to provide comprehensive nursing management to critically ill patients and their families during their critical illness. Clinical experiences in critical care nursing I and II courses are offered in the nursing skills lab and intensive care units<sup>(6)</sup>.

Nursing students are required to complete 9 credit hours (theory and practical) throughout the critical care nursing program as they pass from the emergency nursing course to the critical care nursing I course and ending their studying with critical care nursing II course. During the clinical training, students are allocated to various clinical specialties in emergency & critical care settings to gain clinical experience. Their clinical knowledge, skills, problem-solving ability, and professional attitudes have to be assessed in each course. Nursing student's experiences of their clinical practice provide greater insight to develop an effective clinical teaching strategy in nursing education<sup>(6)</sup>.

Clinical experience is one of the most anxiety producing components of the nursing program which has been identified by nursing students. In a descriptive correlational study by Beck and Srivastava<sup>(7)</sup>, third and fourth year nursing students reported that clinical experience was the most stressful part of the nursing program. Lack of clinical experience, unfamiliar areas, difficult patients, fear of making mistakes and being evaluated by faculty members were expressed by the students as anxiety-producing situations in their initial clinical

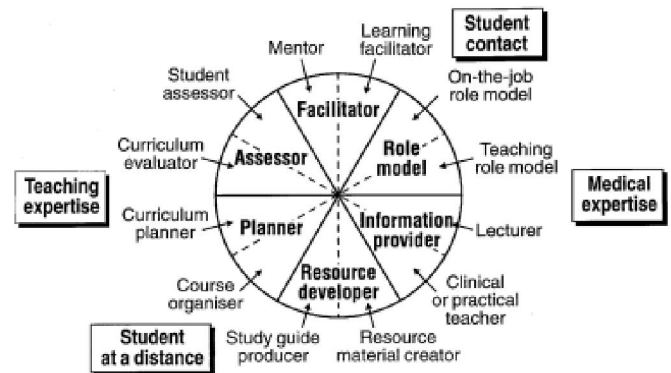
experience<sup>(7)</sup>. Several studies in clinical education were directed towards determining problems frequently encountered in clinical practices and suggest that further studies are needed to identify the leading factors for effective clinical teaching<sup>(2,4,7)</sup>.

It is known that nursing clinical instructors' attitudes, experience, and knowledge influence nursing students. Clinical instructors give students advice on nursing practice, are role models for students, defend them, and evaluate their performance, good clinical instructor help students apply their theoretical knowledge to practice, provide learning opportunities, and help students to do their best. In addition, clinical mentors should be able to make use of all educational strategies to facilitate learning<sup>(8,9)</sup>.

The six areas of activity of the teacher can be; the teacher as information provider, role model, facilitator, assessor, planner and resource developer. Each of the six roles described can be subdivided into two roles, making a total of twelve roles as illustrated in Figure 1. Roles to the right in the figure require more content expertise or knowledge, and roles to the left more educational expertise<sup>(10)</sup>.

Figure (1): The teacher twelve roles

Maintaining and/or improving the quality of nursing education is the most important concern of nurse educators and the subsequent performance of students as nurses in the work-force is often a



reflection of the quality of the nursing education programme and the quality of the clinical experience<sup>(11)</sup>. Therefore, the aim of this study is to investigate the nursing students' and instructors' perception of clinical teaching effectiveness in critical care nursing courses.

## 2. Materials and Methods:

### Material

### Design:

A descriptive qualitative research design was used. A qualitative approach was chosen because

the richness and depth of the findings from this approach provide a unique appreciation of the reality of the experiences. This design was also chosen because the focus was on practices, beliefs and attitudes, which all are part of lived experiences of students.

#### **Setting:**

The study was conducted at the Critical Care & Emergency Nursing Department, Faculty of Nursing, Alexandria University.

#### **Subjects:**

The subjects consisted of two groups. The first group included a convenient sample of all nursing students (the first group) enrolled in critical care (II) course in the sixth semester during the academic year (2009-2010). The total numbers of students expected to participate in the study were (210), 160 were girls and 50 were boys. Students were divided into ten groups. The second group consisted of critical care clinical instructors (7 senior clinical instructors and 2 junior clinical instructors)

#### **Tool:**

**Clinical Teaching opinionnaire**, it was developed by the researchers after reviewing the related literatures<sup>(2-4, 8,12)</sup> and observing the current practice. This tool was used to elicit the nursing student's / clinical instructors' perception of clinical teaching effectiveness in critical care nursing courses. It includes open-ended questions related to the clinical experience. Focus group interviews were used for data collection. The following topics were used to stimulate discussion regarding clinical experience in the focus groups.

- How do you feel about nursing in general?
- How do you feel about being a student/clinical instructor in critical care nursing?
- Is there anything about the clinical field that might cause you to feel anxious about it?
- How do you feel about the clinical instruction?
- How do you feel about evaluation in your clinical experience?
- What are the best and worst things do you think can happen during the clinical experience?
- What do nursing students worry about regarding clinical experiences?
- How do you evaluate your clinical practice for your learning?
- What are the facilitating factors for your learning during clinical practices?
- How do you think clinical experiences can be improved?

The first two questions were general questions which were used as ice breakers to stimulate discussion and put participants at ease encouraging them to interact in a normal manner with the facilitator. During the interview, additional questions were asked for clarification, definition, or reaffirmation.

#### **Methods**

Official permission to conduct the study was obtained from the head of Critical Care & Emergency Nursing Department. All participants were informed about the purpose and design of the study and were told that they were free to withdraw from the study any time.

Data were collected from focus group interviews. The interviews were held at the end of the academic term after students' grades were announced.

**Planning the focus group interviews;** the location for conducting the focus group discussion was selected taking into consideration the freedom from outside distraction. The following materials were assembled for conducting the group discussion: a tape recorder, batteries, name tags and discussion guideline. Students were arranged in ten groups of 21 students. Prior to conducting each focus group discussion, the dates, time, place and duration of the group discussion were reported to each potential participant one week before the session. The planned duration for discussion was approximately 1:30 to 2 hours including the pre-session informal talks.

**Conducting the focus group interviews;** arrangement of the seats was made so that participants are seated in a circle. A period of brief sociable small talks coupled with refreshments was allowed for 15 minutes. The purpose of the study, the group discussion, the use of a tape recorder and the presence of assistant moderators were explained. The tape recorder was turned on after taking permission from the group. Rules for conducting the focus group discussion were explained to the group. The group interacted in a relaxed and friendly atmosphere.

Researchers facilitated the groups. The observer was a public health graduate who attended all focus groups and helped the researchers by taking notes and observing students'/ instructors' non-verbal behavior during the focus group sessions. Observer was not known to students or instructors.

#### **Data analysis:**

At the end of the data collection part of interviews, the records were documented. The following steps were undertaken in the focus group data analysis.

1. Immediate debriefing after each focus group with the observer and debriefing notes were made. Debriefing notes included comments about the focus group process and the significance of data.
2. Listening to the tape and transcribing the content of the tape.
3. Checking the content of the tape with the observer noting and considering any non-verbal behavior. The benefit of transcription and checking the contents with the observer was in picking up parts of words non-verbal communication, gestures and behavior.

The methods used to code and categorize focus group data were adapted from approaches to qualitative content analysis and focus group data analysis. Content analysis, as a research method, is a systematic and objective means of describing and quantifying phenomena. Content analysis allows the researcher to test theoretical issues to enhance understanding of the data. Through content analysis, it is possible to combine words into categories. Inductive content analysis process included open coding, creating themes of categories and abstraction. If there is not adequate knowledge about the phenomenon, or if this knowledge is fragmented, the inductive approach should be used<sup>(2,4,12)</sup>.

For coding the transcript it was necessary to go through the transcripts line by line and paragraph by paragraph, looking for significant statements and **Table (1): Shows the five themes and its subcategory**

	Theme	Sub-theme
S	Student	<ul style="list-style-type: none"> <li>• Orientation</li> <li>• Student/ instructor ratio</li> <li>• Paper work</li> </ul>
C	Clinical practice	<ul style="list-style-type: none"> <li>• Duration of clinical training</li> <li>• Open lab system</li> <li>• Procedure performance</li> </ul>
O	Outcome	<ul style="list-style-type: none"> <li>• ILOs</li> <li>• OSCE</li> <li>• Evaluation tools</li> <li>• Log book</li> <li>• Portfolio</li> </ul>
R	Roles/Responsibilities of instructors	<ul style="list-style-type: none"> <li>• Instructors 'roles</li> <li>• Communication</li> <li>• Relationship with students</li> </ul>
E	Environment	<ul style="list-style-type: none"> <li>• Skill labs</li> <li>• ICUs</li> <li>• Relationship with hospital staff</li> <li>• Equipments and supplies</li> </ul>

#### S-Student;

From the Students' point of view; they stated that they had enough students' preparation;

codes according to the topics addressed. The researchers compared the various codes based on differences and similarities and sorted into categories and finally the categories were formulated into a 5 themes.

The researchers were guided to use and three levels of coding as the following:

Level 1 coding examined the data line by line and making codes which were taken from the language of the subjects who attended the focus groups.

Level 2 coding which is a comparing of coded data with other data and the creation of categories. Categories are simply coded data that seem to cluster together and may result from condensing of level 1 code.

Level 3 coding which describes the Basic Social Psychological Process which is the title given to the central themes that emerge from the categories.

The documents were submitted to two assessors for validation. This action provides an opportunity to determine the reliability of the coding. Following a review of the codes and categories there was agreement on the classification.

#### 3. Results:

The findings obtained will be presented under the major themes Student, Clinical practice, Outcome, Roles/Responsibilities of instructors and Environment {SCORE}.

orientation for all they have to do during their clinical experience and this made them under stress as perceived that they have a lot of work and duties. A

number of students said: "The orientation is enough""We felt that it is a hard thing to be in ICU, we had bad dreams about it. ""The orientation day increased my anxiety and stress; we feel we have to do a lot of work, duties, and assignments" "Clinical orientation was affected by each clinical instructor." "Clinical orientation was simple, according to the clinical instructor and toward the objectives she wants to achieve." As for orientation in the clinical area; students need to be oriented more with patient's condition "We need detailed orientation on patients' files" and they also need to have knowledge regarding all what they see; they said "We don't have enough knowledge regarding some diagnoses and medications"

From the instructors' point of view; they know that the orientation is a major source of students' stress but it is essential. Some of instructors see that it contains a lot of details which can be postponed to the following days.

As for Student/ instructor ratio, students said that the ratio between number of students and clinical instructors is enough. "The ratio between students and clinical instructor is enough." From the instructors' point of view; they see that the ratio is good and wish the ratio to be fixed as one instructor to 5-6 students.

Students complain of paper work as it takes time, effort and put them under stress continuously, paper work needs to be decreased, they said that "We copy the data of the assessment sheet among us" and "The number of the assessment sheets should be limited to two assessment sheets only which is enough for each rotation", also they need the assessment sheet and the record to be changed "The assessment sheet should be modified it can be as a case study or notes in the record sheet" and "We prefer to use the patients' record" From the instructors' point of view; they said that they know that students copy the paper work from each other; so they suggest to make a rubric for the evaluation sheet. Also clinical instructors agreed with students on using records similar to patients' records.

### C- Clinical practice;

Regarding the duration of clinical training, students stated that "The period of clinical training is not enough" and also they said "The training period in the hospital is not enough." They also suggest that the training period should be increased as they said "We need the duration to be increased from 3 hours/week [one day} to be 6 hours/week [on two days]". The instructors' agreed with the students on the duration of clinical training is not enough and suggest being a day weekly.

Some students also said "The clinical trauma rotation is not enough, it needs to be increased". Students also agreed that the clinical practice in the emergency nursing rotation should be modified "In clinical of emergency nursing course we spend a lot of time in performing CPR we need more training in the reception, in the emergency department in the hospital." Open lab system helps students to practice more and to overcome inadequate performance.

Students agreed that the organized schedule is helpful as they decrease their irritability and help them to perform better "The schedule in this term is well organized", also they agreed that practicing in labs before hospitals is essential. They see them skillful in performing critical care procedures "We are skillful in performance". Students also need to work as bedside nurses in the hospital as they said "We need to report patient's condition as nurses' staff in the ICU."

### O-Outcome;

Students mentioned that, they are well oriented with the intended learning outcomes (ILOs) of their clinical training, but some of them didn't achieve all the required objectives. They said that "The clinical objectives were clear, but we didn't achieve all the objectives." "The objectives in the lab are clear and we achieve it more than in the hospital" "The clinical objectives are according to the clinical instructor". They explained that some groups achieve more than the required objectives and they want to be like them. To achieve the objectives, a number of students said that "the content should be fixed for all students". It is important to inform students and to achieve all the required ILOS this is the instructors' point of view; they also said that, "sometimes, students need to learn more about everything in ICU".

They like the final clinical exam to be in the lab as they enjoyed OSCE, they said "OSCE is good". The evaluation tools are good from the students' point of view. "The checklist is a good method for evaluation." on the other side; instructors agreed with students on importance of OSCE in evaluation, but not in the final clinical exam for students on critical care I and critical care II courses.

Students stated that they don't like portfolio and log book, as they said "There is no need for portfolio, it takes a lot of effort and time", "We don't understand what self- reflection is" "We don't understand what is logbook and what the objectives of using it are?" Also some instructors see that there is no need for the logbook, as it is considered more workload for them. Instructors mentioned that students don't accept using a portfolio.

**R-Roles/Responsibilities of instructors;**

The learning community consists of both students and teachers. Helping students learn and practice is a challenge for teachers/ clinical instructors. Students stated that they like the clinical instructors as they said "We like the clinical instructors in the department." Also they said "We will not find like critical care clinical instructors we like them very much." and "Some instructors deal with us in a friendly way/manner, which is what we need from them."

According to focus group findings, among the most important feature of effective clinical teaching were communication capabilities. Students noted that the communication between themselves and their clinical instructors greatly influenced the efficiency of practice hours, as the students were worried about being criticized when they asked a question. In addition, students reported that clinical instructors' body language influences their performance. One student stated: "A clinical instructor should have communication capabilities. Body language is also important. In fact, some instructors had rough, fixed facial expression." another student said that "The bad reaction of some instructors and their comments in front of patients and staff, embarrass us and we feel discouraged". "Some instructors were interested with evaluation and grades more than students." Students, noting that they needed their clinical instructors' attention and care, also thought that empathy was an important feature. They wanted the clinical instructors to appreciate them when they did well, and added that this appreciation would motivate them.

Students wish to be like their instructors, they said "*Some instructors are role model for us*". Noting that they wanted to work with instructors who were experienced in the field, students stated that their clinical instructors are knowledgeable and competent in their specialty. Students expected clinical instructors to be advisors and guides and to offer information or give explanations about clinical practices. Students also wanted to receive answers to their questions or to be provided with a list of needed sources. Students always need support, guidance and motivation; "*We always need guidance and support from the clinical instructors*" They also mentioned that they feel protected with their clinical instructors. Students see that it is good to practice with the same instructor throughout the clinical period "*it is better that clinical instructors don't change along the rotation period.*"

In addition, students noted that feedback was important and that clinical instruction should be motivational, not critical, when providing feedback. Students mentioned that positive feedback

increased their motivation but negative feedback discouraged them from attending practice hours. One student said: "There is always feedback from instructors." and "We're not saying that there shouldn't be feedback, but it should be without judgment". Students also believed that feedback should not be given in front of patients or nurses, who made them, feel inferior. One student said that "negative feedback should be given one to one."

They also need to feel independent as they stated that "Instructors should trust us we need to be independent to care for patients" and "The instructors don't trust us to perform procedures on the patients without supervision". On the other hand; instructors don't trust students as they said that "We don't trust to leave patients with students alone". Some instructors added that, they can depend on students to care for patients according to patients' conditions.

All girl students agreed that instructors deal with boys better than girls. On the other side, all instructors disagreed with students and said they don't differentiate between girls and boys; they are the same for them; except the only male instructor who agreed with students on that, instructors deals with boys better than girls.

All instructors agreed that although they are under stress, they have a lot of paper work to check, they also have their post graduate studies, and they don't have enough time for all their duties; that they try to do their best with students.

**E- Environment of clinical training;**

Students are satisfied with training in labs as they stated that "The training in labs was excellent, but we prefer all of us to be in the lab before the clinical practice in the hospital." There is always a big chance for peer learning and evaluation in labs as students said. They also like to interact with critically ill patients. "We learn more in the hospital as we interact with patients." But they feel irritable "We found ourselves facing patients who have life threatening problems which made us irritable and sometimes we can't save patients' lives". We found ourselves in a stressful, fearful environment for the first time in our lives." The instructors agreed with students that training in labs is essential before training in hospitals.

They see that some ICUs are suitable areas for training; they said that "Unit III is an Ideal ICU" and "We had the best training in Unit III and Unit I but the equipment are unavailable, the relationship with the staff is bad" also they stated that "The ICU of Gamal Abd El Naser hospital is an appropriate area for training as all equipment are available, the relationship with the staff is good as they leave us do what we want with patients" The instructors agreed

with students regarding Unit III and Unit I, but they assured that the ICU of Gamal Abd El Naser hospital is not suitable for training as the number of patients isn't enough. In general, the instructors find the relationship with the hospital staff is good.

Students dislike caring for patients in isolation rooms as they said "Caring for patients in the isolation room is bad we are afraid from infection we are students we should be protected from hazards" From the instructors' point of view; there is no problem that students provide care for patients in isolation rooms, they should follow the universal precautions and deal with any patients as he has infection, they should protect themselves as they said.

As for equipment and supplies, students mentioned that "All equipment are available in labs" and "In labs were very good, but in hospitals were not enough." Regarding hospital staff, students agreed that there is a bad relationship between the students and the hospital staff as they said that "In some units, staff deal with us badly" "Some nurses and doctors don't respect us" and therefore they need the faculty to have some control in the hospital. The instructors agreed that equipment are not enough in the hospital and need the faculty to help to solve this problem especially personal protective equipment needed for infection control measures.

#### 4. Discussion:

Clinical practice is a vital component of the nursing curriculum and has been acknowledged as being central to nursing education. Based on this general premise, there is agreement that nursing curriculum should be directed towards improvement of clinical competencies of nursing students<sup>(12)</sup>. Therefore, the aim of this study is to investigate the nursing students'/instructors' perception of effectiveness of clinical teaching in critical care nursing courses.

The results of this study showed that students were satisfied with their clinical teaching. From their point of view, the *orientation* is necessary, but it is a source of stress for them. Clinical instructors agreed also on the importance of orientation. This is in line with Chesnutt *et al.*<sup>(13)</sup> who stated that; today's hospital environment with its high-acuity patients necessitates tailored orientation programs that account for the unique learning needs of nurses, giving the nurses a solid foundation in application of concepts and as much practice with clinical and time management skills as possible. It is important to schedule a day for orientation and rotate students through in groups and discuss all information about the clinical rotation<sup>(14)</sup>.

It is important to meet the orientation needs of students and adequately prepare them to care for

critically ill patients. The orientation may be stressful for students because they find themselves loaded with a lot of duties and responsibilities. Orientation program is essential to be detailed as it can be considered as a contract with students. Also, students have the right to know everything about the clinical rotation period.

As for *Student/ instructor ratio*; students and clinical instructors agreed that the ratio is adequate. In some nursing faculties, student-faculty ratios range from 5:1 to 15:1 (Ulker *et al.*,<sup>(15)</sup>). The average student-faculty ratio in clinical placements is approximately 7:1<sup>(8)</sup>. The student/ instructor ratio plays an important role in clinical teaching; especially in critical care nursing. The nature of units, the severity of patients' condition, presence of advanced technology and machines and the types of procedures, all these factors necessitate that the student/ instructor ratio not to exceed 5-7:1.

Before finalizing the protocol for evaluating clinical performance in a course, the teacher should review the purpose and number required of each assignment completed by students in clinical practice. What are the purposes of these assignments, and how many are needed to demonstrate competency? For example, in some clinical courses, students complete an excessive number of written assignments. How many assignments, regardless of whether they are for formative or summative purposes, are needed to meet the outcomes of the course? Students benefit from continuous feedback from the teacher, not from repetitive assignments that contribute little to their development of clinical knowledge and skills. Instead of daily or weekly care plans or other assignments, which may not even be consistent with current practice, once students develop the competencies, they can progress to other more relevant learning activities<sup>(20)</sup>.

Paper work causes a lot of stress for both students and instructors. This is in line with Walton *et al.*,<sup>(8)</sup> who stated that a heavy workload was identified as a major stressor for nursing students. Students have many academic demands such as work papers, examinations and other written assignments. Also, Frassrand *et al.*,<sup>(16)</sup> found in her study those priority stressors to include in descending order: academic, environmental, financial, interpersonal, and personal. For academic stressors; performance, written work and clinical practice topped the charts. In addition, the most reported environmental stressor was teacher/student relationships, with students perceiving teachers to be insensitive<sup>(16, 17)</sup>. Another study mentioned that; nurse educators find teaching in the classroom and in the clinical area most satisfying however, excessive paperwork and endless meetings were given as reasons for perceived

frustrations by nurse educators<sup>(11)</sup>. Students should learn how to document correctly, therefore, it is essential to review and modify the paperwork required from students to be clear, simple, concise and effective.

The instructor should consider the time needed to complete the evaluation, provide feedback, and grade the assignment. Instead of requiring a series of written assignments in a clinical course, the same outcomes might be met through discussions with students, cases analyzed by students in clinical conferences, group writing activities, and other methods requiring less teacher time and accomplishing the same purposes. Considering the demands on nursing faculty, it is important to consider one's own time when planning how to evaluate students' performance in clinical practice.

Students and instructors agreed on the duration on clinical training needs to be increased. This is in line with Eta *et al.*,<sup>(18)</sup> who found that clinical instructors were dissatisfied with duration of students' placement and the limited time for clinical teaching was a major challenge which faced them as clinical educators. Also, in Elçigil *et al.*,<sup>(17)</sup> study (2011) students reported that although the patients with severe illnesses increased their workload, they have learned a lot from them. They emphasized that nursing care for patients with severe illnesses help them to gain experience and prepare them for professional life.

Effective teaching requires careful planning. The course coordinator is responsible for planning and adapting the entire course, theory and practice components of the course should work together to develop students' knowledge, skills, and attitudes. Courses usually begin in classrooms with theoretical background and the introduction, demonstration, and practice of related concepts and skills. They continue in a simulated environment in the skill development lab<sup>(14)</sup>, where students continue to develop knowledge, skills, and attitudes. Finally, students practice key skills and demonstrate key attitudes in ICUs (supervised clinical setting).

The amount of time that students should spend in the clinical practice has been the subject of much debate among nurse educators<sup>(1)</sup>. The length of time spent in clinical activities is no guarantee of the amount or quality of learning that results. Both the activity and the amount of time need to be individualized. Most nursing faculty members worry far too much about how many hours students spend in the clinical setting and too little about the quality of the learning that is taking place. A 2-hour activity that results in critical skill learning is far more valuable than an 8-hour activity that merely promotes repetition of skills and habit learning.

In critical care nursing courses, the duration of the clinical training is appropriate according to the planned objectives that are required to be achieved by students. Students want to do more and more for critically ill patients, may be they want to act as in ER movie; therefore they need the time and duration of the clinical training to be increased. In nursing education, clinical learning activities historically have been confused with caring for patients as the typical activities of nursing students center on patient care. Learning is assumed to take place while caring. However, the central focus in clinical education should be on learning, not doing, as the student role. Gaberson *et al.*,<sup>(1)</sup> stated that the role of the student in nursing education should be primarily that of learner, not nurse. For this reason, the term nursing student rather than student nurse is preferred, because in the former term, the noun student describes the role better.

Provision of nursing care for patients with complicated conditions was a positive factor for clinical learning. Caring for critically-ill patients required that students put all their theoretical knowledge into practice and make use of their decision making skills. When a student realized that she could take care of such patients her self-confidence increased<sup>(12)</sup>. Conflicting with this study was the finding by Kloster *et al.*,<sup>(19)</sup> that students prefer to work with healthy individuals rather than look after elderly patients with patients with chronic diseases, or with those who had psychiatric problems.

Course schedule is developed to achieve the learning outcomes outlined in the course specification (syllabus), therefore, the sequence of activities in the schedule reflects the process of developing knowledge, skills, and attitudes. Schedule should be prepared correctly to achieve the required ILOs. Clear ILOs help determining the course content, how the course will be taught and how students' learning should be assessed. The development of clear, concise and measurable learning objectives is a critical step in planning the course<sup>(14)</sup>.

Clinical evaluation is a process by which judgments are made about learners' competencies in practice. This practice may involve care of patients, families, and communities; other types of experiences in the clinical setting; simulated experiences; and performance of varied skills. There are many evaluation tools for use in nursing education as checklists, logbooks and portfolio<sup>(20)</sup>.

Evaluation methods can be used for formative or summative evaluation. In the process of deciding how to evaluate students' clinical performance, the teacher should identify if the methods will be used to provide feedback to learners (formative) or for



grading (summative). Some of the strategies designed for clinical evaluation provide feedback to students on areas for improvement and should not be graded. Other methods such as rating scales and written assignments can be used for summative purposes and therefore can be computed as part of the course or clinical grade<sup>(1,20)</sup>.

Clinical evaluation is not the same as grading. In evaluation the teacher makes observations of performance and collects other types of data, then compares this information to a set of standards to arrive at a judgment. From this assessment, a quantitative symbol or grade may be applied to reflect the evaluation data and judgments made about performance. The clinical grade, such as pass-fail or A through F is the symbol to represent the evaluation. Clinical performance may be evaluated and not graded, such as with formative evaluation or feedback to the learner, or it may be graded. Grades, however, should not be assigned without sufficient data about clinical performance<sup>(20)</sup>.

An Objective Structured Clinical Examination (OSCE) provides a means of evaluating performance in a simulation laboratory rather than in the clinical setting<sup>(20)</sup>. In an OSCE students rotate through a series of stations; at each station they complete an activity or perform a task, which is then evaluated. In this study students enjoyed performing activities in the OSCE; they also found it one of the most powerful learning sessions they ever passed in their clinical practice. This may be attributed to all students pass the same stations, are evaluated with the same tools and not experiencing stress as in ICUs. Nahas and Yam<sup>(21)</sup> examining the effects of clinical experience on student learning and the problems students encounter during their clinical teaching. These studies also have shown stressors associated with fear of making mistakes, anxiety over possible criticisms from peers, being able to communicate with health personnel and patients, providing care for the seriously ill or terminal patients, having the necessary technical skills for procedures, attitudes towards and expectations of staff of students<sup>(9)</sup>.

Using of valid evaluation criteria for performance evaluation can play an important role in effectiveness of nursing practice<sup>(8)</sup>. Ford *et al.*,<sup>(21)</sup> stated that evaluation should provide the student with knowledge regarding how well they performed the skill as well as knowledge of results and should be timely, specific (skill and developmental level), and positive. Lee *et al.*,<sup>(22)</sup> found that students give more importance to evaluation than do instructors.

Portfolios are valuable for clinical evaluation because students provide evidence in their portfolios to confirm their clinical competencies and document

new learning and skills acquired in a course<sup>(20)</sup>. They can also be used for students' self-assessment of their progress in meeting personal and professional goals. Students in this study don't accept using the portfolio, the reason for this may be; they are asked to do a portfolio for each course they are studying which considers a load which they hate.

A Logbook contains a list of skills or tasks that students should be able to perform. Yaghobian *et al.*,<sup>(23)</sup> found that using logbook in clinical training can prevent students' errors and confusion in clinical field by sharing standards in clinical education. Students stated they don't know the importance of logbooks; this may be because of using the traditional methods on documenting the frequency of performed or observed procedures as notebooks. Log books help students to manage time and plan to have more effective clinical field.

Helping students learn and practice is a challenge for teachers/ clinical instructors. Students in this study need instructors to give them support, guidance and motivation, have a good relationship with them and give them constructive feedback. They also noted that effective clinical instructor should be able to communicate without prejudice, give positive feedback, have empathy, and offer students information. A good teacher can be defined as a teacher who helps the student to learn. He or she contributes to this in a number of ways. The teacher's role goes well beyond information giving, with the teacher/instructor having a range of key roles to play in the education process<sup>(8,10)</sup>.

Some important characteristics related to the instructors' personality also may influence the effectiveness of their teaching, including enthusiasm for nursing and teaching, the ability to admit mistakes honestly, cooperation and patience, approachability, self-confidence and flexibility in the clinical area, and the ability to provide opportunities for students to vent their feelings. Communication between clinical instructors and students affects student success in clinical practice. Good communication requires all parties to trust each other, to be honest and tolerant, and to have empathy for each other. A strong instructor-student relationship based on good communication enables students to learn more and allows both students and mentors to enjoy learning<sup>(8)</sup>.

Students emphasized that positive feedback was motivating. Students also dislike performance evaluations made in front of staff and patients as they want to be appreciated for their performance. This is in line with Elçigil *et al.*,<sup>(17)</sup> who found that instructors' attitude and communication skills played a role in learning and recommended that feedback should be given in a constructive manner avoiding

giving negative messages. Feedback helps students recognize their weaknesses and improve themselves; therefore, feedback should be constructive, not destructive. Positive feedbacks increase students' self-confidence. They need to have a good relationship with others and giving feedbacks without hurting feelings.

How a nursing clinical instructor evaluates and gives feedback to students is an important part of clinical education; in fact, it has been noted that evaluation can also affect students' self-respect and self-confidence therefore, fairness and constructive criticism contributed to learning. Lee *et al.*,<sup>(22)</sup> emphasized the importance of evaluation in both teaching/learning interaction and motivation. Girl students agreed that instructors deal with boys better than girls. This may be due to the culture as they deal with males better than women, also boys' reaction (more aggressive) differ than girls.

Effective education offers a balance of theoretical and practical experiences to help learners develop competencies that are essential for their entering a healthcare profession and continuing to develop professionally throughout their careers. Effective clinical education is linked to social context. Broad social, cultural, historical, and political forces interrelate to form and shape teaching and learning, and thus the essential competencies that learners must develop<sup>(14)</sup>. The necessary facilities, resources, and equipment should be available for teaching; the teaching should be consistent with what is being taught in other, related courses, there is a clear link between the classroom and the practical or skills development components of the course, and staff members at the clinical practice facility follow the same procedures as those taught in the course.

Because nursing is a professional practice discipline, what nurses and nursing students do in clinical practice is more important than what they can demonstrate in a classroom. Clinical learning activities provide real-life experiences and opportunities for transfer of knowledge to practical situations<sup>(14)</sup>. Some learners who perform well in the classroom cannot apply their knowledge successfully in the clinical area. Students learn prerequisite knowledge in the classroom and through independent learning activities that they later apply and test, first in skills development lab and then in clinical practice.

The skills development lab is used as a simulated environment especially in critical care nursing students for demonstration and opportunities for small group activities and practice with feedback before them facing the real situations in ICUs<sup>(14,24,25)</sup>. Therefore, the labs should be well equipped, well lighted and ventilated, safe for practicing, have enough supplies and teaching materials and adequate

space for students. ICUs should be selected and prepared by ensuring adequate supplies for the related skills, adequate and appropriate patient caseload and flow, and informed clinical instructors. Nursing students who get along well with nurses' staff feel more self-confident and become more creative while performing nursing care. Students feel more satisfied when they are considered as members of the team<sup>(12)</sup>. Most hospital staff members are receptive to students coming to their work place to practice applying new skills as they have been in that situation themselves and may be again. Sometimes, certain staff members don't want to host students; they must be treated carefully as their unwelcoming attitudes can create a negative leaning environment.

*Limitations of the study;* This study aimed to investigate the nursing students' and instructors' perception of clinical teaching effectiveness in critical care nursing courses. This study was limited to critical care nursing students / instructors. Therefore, findings cannot be generalized to include other students / instructors in other courses and nursing faculties.

## Conclusion

The findings of this study and the literature support the need to rethink about the clinical skills training in nursing education. It is clear that all themes mentioned by the students play an important role in student learning and nursing education in general. Nursing students/instructors expressed their views and mentioned their concerns about student, clinical practice, outcome, roles/responsibilities of instructors and environment.

- S- Students; Students had enough orientation. Students are under stress because of a lot of work and duties. The ratio of instructors to students (1: 6) is adequate.
- C- Clinical Practice; the instructors' agreed with the students on the duration of clinical training is not enough. Open lab system help students to practice more and to overcome their deficiencies in performance. The organized schedule decrease students' irritability and help them to perform better. Students see them skillful in performing critical care procedures.
- O- Outcome; Students are well oriented with the intended learning outcomes (ILOs) of their clinical training. Students and instructors enjoyed OSCE. The evaluation tools are good from the students' point of view. Students and instructors don't like portfolio and log book.
- R-Roles/Responsibilities of instructors, students like their clinical instructors they see them role models, they worry about being criticized. The positive feedback act as students' motivation.

Girl students agreed that instructors deal with boys better than girls.

- **E- Environment of clinical training;** Students and instructors are satisfied with training in labs. They dislike caring for patients in isolation rooms. In labs equipment and supplies were adequate, but in hospitals were not.

### Recommendations

The result of this study would help us as educators to design strategies for more effective clinical teaching. The results of this study should be considered by nursing education and nursing practice professionals. Faculties of nursing need to be concerned about solving student problems in education and clinical practice. The findings support the need for Faculty of Nursing to plan and implement nursing curriculum in a way that nursing students be involved actively in their education. The information gained from this study can assist with the improvement of clinical education. This study also suggests that a positive experience in clinical learning seems to have strong effect on students' professional socialization.

- **S- Students;** clinical orientation is essential. It should be concise clear and formal. A contract with students should be formulated. Orientation in the clinical area; should be directed toward patients' condition. Paper work should be decreased and modified, other methods as discussions with students, cases analyzed by students in clinical conferences, group writing activities, and other methods requiring less time and accomplishing the same purposes. Documentation using assessment sheet and records similar to patients' records is important for students to work in the real area. It is useful to make a rubric for evaluating all required paper work.
- **C- Clinical Practice;** Duration of the clinical training should be appropriate according to the planned objectives that are required to be achieved by students. The role of the student should be primarily that of learner, not nurse.
- **O-Outcome;** portfolio and logbook should be simplified. Students and instructors should be oriented with the importance of using them. Instructors' portfolio should be enhance
- **R-Roles/Responsibilities of instructors;** engagement of students in the clinical teaching, can be affected by several factors that should be considered, which are; motivation, students' feeling of safety, belonging, being respected, self-esteem, students need to feel valued by praise, words of appreciation and constructivist rather than destructive criticism. Students' perception of

the relevance of what are being taught is a vital motivator for learning. Effective time management and stress reduction strategies should be taught to instructors.

- **E- Environment of clinical training;** effective communication channels should be done between the faculty and hospitals. Staff nurses can be prepared to aid in the clinical teaching. Students should be well prepared to care for patients in the isolation rooms. Equipment and supplies should be available for training especially the personal protective equipment (PPE).

**Recommendations for further research;** Longitudinal studies to investigate the nursing students' and instructors' perception of clinical teaching effectiveness in randomly selected multiple faculties are recommend

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