

**THE EFFECT OF EDUCATION PROGRAM ON PERFORMANCE OF CLINICAL NURSE INSTRUCTORS IN NURSING FACULTIES IN KHARTOUM STATE 2019**<sup>1</sup>\*Mahasin Almahi Balla Fadil Alla and <sup>2</sup>Hayat Fadallah Mukhtar<sup>1</sup>Lecture of MSN, <sup>2</sup>Associate Prof. of MSN.  
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**ABSTRACT**

**Introduction:** Clinical training is different and more complicated than theoretical education. In the nursing profession, a well-trained and educated, experienced workforce is very important. Improving the quality and quantity of every profession depends on increasing the knowledge and proper functioning of its staff. It also requires them to have professional and correct training. **Aim:** to evaluate the effect of education program on medical –surgical clinical nurse instructors' performance regarding supervision of nursing students, demonstration of procedure ,applying nursing process and case presentation. **Method:** Aquasi – experimental design was conducted in 9 faculties of nursing sciences at Khartoum state. Total coverage for 46 clinical nurse instructors. Data were collected though assessment questionnaire and observational checklist. **Result:** There was high significant improvement in the performance of clinical nurse instructors after implantation of education program. **Conclusion:** Education program has a positive effect on clinical nurse instructors' performance. The findings suggest the important of prerequisite training courses for clinical instructor and using guidelines for training nursing students.

**KEYWORDS:** Education program, clinical instructors, clinical nurse educator, nursing students, performance.**INTRODUCTION**

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.<sup>[1]</sup>

Clinical teaching is a complex interaction of student and teacher within the context of the environment in which it occurs. And learning in a clinical setting is complementary to and a continuation of theoretical and laboratory learning and is direct preparation for the student's future practice. In clinical practice the student can adapt to reality, learn from role models and grasp the ethical, interpersonal and organizational implications of his/her work. It fosters the development of a professional identity and the assimilation of knowledge through repetition.<sup>[2]</sup>

Clinical teaching and learning should focus on essential knowledge, skills, and attitudes. Educators need to identify the knowledge, skills, and attitudes that are most essential for students to learn.<sup>[1]</sup>

Skills are the most significant outcomes of clinical learning. the clinical teaching focuses on the performance component. The skills include psychomotor skills; they are purposeful, complex, movements –

oriented activities that involve an overt physical response requiring neuromuscular co- ordination. They compass the ability to carry out proficiently, smoothly and consistently under carry condition and within appropriate time limits, Interpersonal skills; they are used to assess the patient need, to plan and implement patient care, to evaluate the outcomes of care and to record and disseminate information; these skills are communication, therapeutic use of self and using the teaching process and organization skills; nurse needs these skills in order to set priorities, manage conflicting expectation and sequence their work to perform efficiently. Clinical learning activities provide opportunities for learner to develop leadership, followership and management skills. Clinical learning produces important outcomes in attitudes and values that represent the humanistic and clinical dimensions of nursing. These values are developed and internalized through the process of professional socialization.<sup>[3]</sup>

The process of clinical teaching includes five steps: Identifying the outcomes for learning, assessing learning needs, planning clinical learning activities, guiding students and evaluating clinical learning and performance.<sup>[1]</sup>

The **nursing process** is a deliberate problem-solving approach for meeting people's health care and nursing needs.

Although the steps of the nursing process have been stated in various ways by different writers, the common components cited are assessment, diagnosis, planning, implementation, and evaluation. ANA's *Standards of Clinical Nursing Practice* (2004) includes an additional component entitled outcome identification and establishes the sequence of steps in the following order: assessment, diagnosis, outcome identification, planning, implementation, and evaluation.

The traditional steps are defined as follows:

**Assessment:** The systematic collection of data to determine the patient's health status and any actual or potential health problems. (Analysis of data is included as part of the assessment. Analysis may also be identified as a separate step of the nursing process.), **diagnosis:** Identification of the following two types of patient problems: nursing diagnoses: Actual or potential health problems that can be managed by independent nursing interventions, Collaborative problems: "Certain physiologic complications that nurse monitor to detect onset or changes in status. Nurses manage collaborative problems using physician-prescribed and nurse-prescribed interventions to minimize the complications of the events, **planning:** Development of goals and outcomes, as well as a plan of care designed to assist the patient in resolving the diagnosed problems and achieving the identified goals and desired outcomes, **implementation:** Actualization of the plan of care through nursing interventions and **evaluation:** Determination of the patient's responses to the nursing interventions and the extent to which the outcomes have been achieved.<sup>[4]</sup>

Clinical supervision is defined as the provision of guidance and feedback on matters of personal, professional and educational development in the context of a trainee's experience of providing safe and appropriate patient care.<sup>[5]</sup> Clinical supervision plays an important part in the education of health professionals. It has three main components: education, support and management. Educationally, the role of clinical supervisors will depend on the context of the clinical placement. Most commonly, clinical supervisors are responsible for clinical teaching and creating a learning environment by providing an educational framework for students and other clinicians involved in the placement. The framework should ensure that students feel supported in the clinical environment, and that clinical teachers understand the learning outcomes of the placement. Supporting the students also means that clinical supervisors take opportunities to help students reflect on their experiences, and identify their own learning goals. Managerially, the clinical supervisor is also responsible for student and patient safety, promoting the use of best practice guidelines and risk assessment.<sup>[6]</sup>

A Simple Five-step Method for Teaching Clinical Skills.

One of the problems facing today's office-based preceptor is how to teach psychomotor skills in some kind of organized fashion that will optimize the use of time and produce a satisfactory learning experience for the student. One technique that has been used successfully in the American College of Surgeon's Advanced Trauma Life Support course<sup>1</sup> is the five-step method for teaching psychomotor skills.

**Step 1:** To be motivated to learn a skill, the learner must understand why the skill is needed and how it is used in the delivery of care, **Step 2:** The preceptor should demonstrate the skill exactly as it should be done without talking through the procedure. This silent demonstration gives students a mental picture of what the skill looks like when it is being done correctly, **Step 3:** The preceptor then repeats the procedure but takes time to describe in detail each step in the process. This will help students see how each step fits into the optimal sequence and will allow time for students to ask questions or seek clarification of a step or a procedure, **Step 4:** Students talk through the skill. By asking students to describe step by step how to do the skill, the preceptor will ensure that the students understand and remember each step in the sequence of performing the skill. This will also help the students commit the process to memory so they can recall steps as they move to the next procedure and **Step 5:** The students perform the skill. Now students are ready to do their first attempt at the skill with the preceptor carefully observing and providing feedback or coaching as needed. Following a successful attempt, students should continue to practice until they reach the desired level of proficiency.<sup>[7]</sup>

## MATERIAL AND METHODS

Aquasi – experimental design was conducted in 9 faculties of nursing sciences at Khartoum state -sudan. Total coverage for 46 clinical nurse instructors. Data were collected through observational checklist.

### Sample

Clinical instructors (n=54) who train nursing students in medical and surgical wards and meet inclusion criteria. About 54 clinical instructors meeting inclusion criteria and pre education program test were done for them. 48 clinical instructors who enrolling in all educational sessions about training nursing students. 46 clinical instructors after three months from an implementation of education program, were evaluated.

### Pilot study

Through use of Pearson Coefficient Factor Test (to test the validity of the tools) and Alpha Cronbach Formula (to test the reliability of the tools) the following results were obtained:- the values of Pearson Coefficient factor are positive and above 0.20, at significant level < (0.05), which indicates that the checklist is valid to test the hypothesis of this study.

The internal validity of the checklist was 0.97, which is greatly above 0.50 and indicates high reliability of the checklist and it is valid to test the hypothesis of this study. The content validity was established by three expertises in education who reviewed the tools for clarity, relevance, comprehensiveness and applicability for implementation. Then according to their opinions some modifications were done.

#### Data collection technique

The data was collected in two phases before implementation of education program (pretest data), each of responder was observed by checklist for their skills in applying clinical training of students. A direct observation was carried out by researcher.

#### Implement of education program

After collection of pretest data the responders were received the education program. The content of educational program including theoretical and training component. An orientation about the education program was given first to give the participants the full idea about the phases of the application of the program in order to facilitate their contribution. Orientation to the education program format, including: the lecture's time, place and the training materials. Social media, eg what sap was used for more interaction and clarify queries. The training part regarding demonstration of procedure, supervision of nursing students, applying nursing process and case presentation were implemented in clinical areas. Different teaching methods as demonstration, re-demonstration, role play and supervised practice have been used.

Same data collection tools were used three months after education program (post test).

#### Statistical analysis

Data were collected, computed and statistically analyzed using the Statistical Package for Social Sciences Software (SPSS vr 20.0). data were presented using descriptive statistics in the form of frequencies, percentages, mean and standard deviation for variables. For comparison between the same group (pre & post test) t, test correlation were used for the detection of significant differences. Categorical variables were compared using chi-square test. The 0.05 level was used for statistical significance (P value  $\leq$  0.05).

#### Ethical consideration

Approval was obtained from Review Committee of Karary University.

The acceptance was a signed by the deans of nursing colleges.

The study was explained to the participants in simple words.

The privacy of instructors was protected.

Confidentiality and anonymity of the participants were assured through coding the data.

Participants were participated voluntary.

#### RESULT

**Table (1)** show distribution of clinical nurse instructors according to socio - demographic data.

In relation to performance of clinical nurse instructor regarding supervision of students in clinical training, demonstration of procedures, applying nursing process and case presentation as illustrated in **Tables (2), (3), (.4) and (5)** consequently, demonstrate that the clinical nurse instructors' performance has been improved high significantly after implementation of educational program were all p values ranged from 0.001 to 0.009.

There was high significant improvement in overall performance of clinical nurse instructors after implementation of education program as shown in **Table (6)**, p values  $\leq$  0, 05. There was insignificant association between clinical nurse instructors' performance and educational level and insignificant association between clinical nurse instructors' performance and experience period were all p values  $>$  0, 05 and significant association between previous training course and performance as illustrated in **tables (7)**.

**Table (1): Distribution of clinical nurse instructors according to socio - demographic data.**

	N	%
Male	8	17.4
Female	38	82.6
Age		
20-29 years	17	37.0
30-39 years	17	37.0
40-50 years	11	23.9
> 50 years	1	2.2
Level of education		
B. Sc.	20	43.5
M. Sc.	21	45.7
PhD	5	10.9
Experience		
< 2 years	15	32.6
2-5 years	14	30.4
6-10 years	11	23.9
> 10 years	6	13.0
Clinical learning department		
Medical nursing	19	41.3
Surgical nursing	24	52.2
Medical and surgical	3	6.5
Previous training course in clinical education		
Yes	10	21.7
No	36	78.3

**Table (2): Differences in CIs' performance regarding supervision of students between before and after education program.**

Items	Pre (n=46)	Post (n=46)	P
	Mean ±SD	Mean ±SD	
Suitable number of students were supervised by clinical instructor	0.85±0.99	1.00±0.94	0.452
Clinical instructor is available to students at all time of clinical practice	1.09±0.66	1.54±0.50	0.003*
A clear description of expectations and responsibilities was outlined	0.83±0.71	1.96±0.21	0.001*
Provides opportunities for practice of clinical skills and supervising the student's performance	0.65±0.77	1.89±0.31	0.001*
Provide direct, adequate and regular supervision of students during clinical practice according to level of student	0.67±0.63	1.35±0.57	0.002*
Motivate students and create a supportive climate	0.59±0.62	1.33±0.67	0.003*
Interpret, clarify and instruct based on the observation of students	0.61±0.65	1.83±0.44	0.002*
Provides specific, timely, and useful feedback on student progress	0.33±0.47	0.85±0.62	0.001*
Use evaluation tools to evaluate students, performance	0.85±0.67	1.74±0.61	0.001*

\*=Significant differences at  $p \leq 0.05$ .

**Table (3): Differences in CIs' performance regarding demonstration of procedures before and after education program.**

Items	Pre (n=46)	Post (n=46)	P
	Mean ±SD	Mean ±SD	
Explain the purpose of demonstration clearly	0.39±0.71	1.89±0.43	0.001*
Demonstrates effectively clinical skills and procedures	0.57±0.81	1.89±0.38	0.002*
Provide opportunity to student to perform the procedure after demonstration	0.52±0.81	1.93±0.33	0.001*
Provide reinforce feedback	0.13±0.40	1.07±0.83	0.002*
Corrects mistakes without belittling students	0.52±0.78	1.74±0.57	0.003*

\*=Significant differences at  $p \leq 0.05$ .

**Table (4): Differences in CIs' performance in applying nursing process before and after education program.**

Items	Pre (n=46)	Post (n=46)	P
	Mean ±SD	Mean ±SD	
Training students in taking history of patient	0.89±0.74	1.93±0.95	0.002*
Training students on applying physical examination	0.09±0.41	0.98±0.95	0.001*
training students on developing nursing diagnosis and collaborative problems	0.93±0.85	1.96±0.21	0.006*
training students on developing measurable outcome criteria and plan of action	0.74±0.71	1.96±0.21	0.001*
training students on implementing the patient's plan of care	0.89±0.80	1.96±0.21	0.001*
training students on evaluation of patient outcomes.	0.46±0.72	1.91±0.28	0.001*

\*=Significant differences at  $p \leq 0.05$ .

**Table (5): Differences in CIs' performance regarding case presentation before and after education program.**

Items	Pre (n=46)	Post (n=46)	P
	Mean ±SD	Mean ±SD	
Select a case and have student present relevant information and nursing management of the case	1.35±0.90	1.93±0.33	0.007
Instructor guide and discusses cases with students.	1.28±0.89	1.93±0.33	0.009
Ask the student about the general condition of the patient to increase student's knowledge	1.11±0.88	1.93±0.33	0.001
Clinical instructor add comment on incomplete answers	1.13±0.88	1.91±0.35	0.001
Close discussion with reports, decision and recommendation.	0.50±0.72	1.70±0.63	0.004

**Table (6): Overall performance of clinical nurse instructors.**

Total performance	Group			
	Pre		Post	
	N	%	N	%
Poor (0- 60%)	17	37.0	3	6.5
Medium (61-79%)	19	41.3	3	6.5
Good (80- 100%)	10	21.7	40	87.0
Total	46	100.0	46	100.0

**Correlations**

	N	Correlation	P value
Overall pre & Overall post performance	46	-0.41	0.011

\*=Significant differences at  $p \leq 0.05$ .

**Table (7): Cross tabulation of educational level, experience period, previous training course versus overall performance.**

	P value
educational level	0.078
experience period	0.21
previous training course	0.001

\*=Significant differences at  $p \leq 0.05$ .

**DISCUSSION**

The clinical education is one of the most important parts of education in nursing. Implementation of education program is beneficial and vital for improvement of clinical instructors' competencies.

This study aimed to evaluate the effect of educational program on clinical nurse instructors' performance in clinical training of students.

The present study was carried among 46 clinical nurse instructors, the majority of them were female 82.6, similar result in study conducted by Lalonde Michelle and Linda McGillis<sup>[8]</sup> represented that most instructors were female ( $n=39$ , 78%).

Most of participants aged 20-39 years, which mean that the most of the participants were of young age group and

this can help in ongoing training program. M.Sc. degree was the most available qualification they had.

Highest percentage of clinical instructors their experience period was less than 2 years. This indicates that considerable proportion of the participants in the present study had no long experience; this may be due to increase migration of more experience CIs. Criteria for the evaluation of clinical nurse specialist master's, practice doctorate and post-graduate certificate educational programs include that the clinical instructor who teach CNS must be expertise in teach all courses and implement essential clinical learning experiences.<sup>[9]</sup> Most of participants were not received previous training course in clinical nursing education.

In the current study, there was high significant improvement in clinical nurse instructor's performance after implementation of educational program, P values < 0.05. This is in line with result of study conducted by Somia Elkhider<sup>[10]</sup> which revealed that training program improved the obstetric clinical Instructors' performance with (P value 0.000). The result is similar to A qualitative study by Mariette Engtsson and Elisabeth Carlson<sup>[11]</sup> showed that the a continuous professional development course was assist preceptors in deepening their knowledge of preceptorship in regard to planning, leading and implementing educational activities directed at students, healthcare professionals.

The findings point out the importance of the continuous in- service educational programs.

There was significant association between receiving previous training course and clinical nurse instructors' performance. There was insignificant association between performance and educational level.

Insignificant association between clinical nurse instructors' performance and experience period, p values > 0, 05.

### CONCLUSION

Clinical nurse instructors' performance was improved high significantly after implementation of educational program,  $p \leq 0.05$ . There was association between previous training course and performance, p value 0.001. It is important to use guidelines of clinical education by clinical instructor. It is recommended for continuous refreshment courses in clinical nursing education for clinical instructors.

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