

## Measurement Of Effectiveness Of Clinical Learning Environment For Nursing Faculty Students At Mansoura University, Egypt.

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### **Abstract:**

**Background:** Clinical experience is the most important component of nursing education which must be acquired in appropriate environment. The quality of clinical learning environment (CLE) is a valid indicator to show the quality of nursing curriculum. Therefore, assessment of CLE is a duty of nursing education administrators who are facing problems in this assessment. Complex nature of CLE and lack of appropriate tools to measure the quality of this environment are two most common of these problems.

**Aim:** The aim of the present study is to measure the degree of effectiveness of clinical learning environment for nursing faculty students at Main Mansoura university Hospital.

**Research design:** Cross-sectional analytical design was used in the present study.

**Methods:** The study was conducted in main Mansoura University Hospital. The study subjects include students (n=247), clinical instructors (n=58) and group of jury which includes academic nursing faculty staff (n=24) and nurse managers from different Mansoura University Hospital settings (n = 22). The data was collected by using CLE standards opinionnaire sheet, CLE assessment questionnaire and CLE observational checklist.

**Results:** The face validity of all accreditation standards ranged between 83.74% and 94.79% with content validity index 89.67%. There was no statistically significant difference between academic staff and nurse managers agreement of clinical learning environment standards  $p = 0.627$ . The overall academic staff agreement on clinical learning environment standards was 84.834% of maximum score and 87.304% of maximum score for nurse managers. There was a statistically significant difference ( $p=0.011$ ) between the assessment of students and clinical instructors of fulfilling of communication and feedback standards ( $93.61 \pm 6.287$  and  $80.341 \pm 3.866$  of maximum score respectively). Observation of clinical learning environment standards, most of the standards are either partially met or not met. The percentage of fully met standards ranged between 13.33% to 25.00 %. There was a statistically significant difference between assessing of clinical learning environment standards as perceived by students and clinical instructors with these observed by the researchers  $p < 0.001$ .

**Conclusion:** Continuous measuring the effectiveness of CLE will enhance the quality of training and improve students' knowledge and skills.

**Key words:** Efficacy, learning effectiveness, clinical learning environment, students, nursing.

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### **I. Introduction:**

High-quality patient care is only feasible if nurses have received high-quality teaching during their course of study and their work years ( Leach, 2001) Nurses have a key role in promoting health of the people they care for. The competence of nurses is based on their education and knowledge and skills provided to them (Liimatainen et al, 1999). Nursing development starts in a university environment and continues in a clinical setting, where they predominantly learn on the job (Fluit et al, 2010).

The aims of nursing education principally center on the transmission of nursing knowledge, and assisting nursing students to acquire the necessary skills and attitudes associated with nursing practice. As with professional preparation generally, nursing education encompasses the three domains of learning, the cognitive, the affective, and the psychomotor (Salsali, 2005).

The educational preparation of nurses includes a practice component where learning is integrated in a workplace setting. The practice component is an important part of teaching and learning in the applied professions (Ako\_admin,2010). Clinical (applied learning) components of nursing education are critical to the overall curriculum and form more than half part of nursing curriculum (Astin, et al 2005). The clinical practices are the heart of nursing's professional program of study and the most widely discussed issue because it prepares the students for their professional role, provides them with the opportunity to prepare themselves for their future clinical work, allows learners to "apply knowledge to practice, to develop problem-solving and decision making skills, and to practice responsibility for their own actions by actively providing nursing care to patients ((Infante and Makarem, 2001; and Sheehan, 2010).

Clinical education plays a crucial role in undergraduate nursing program. Not only does it provide opportunities for students to apply the theory learned in the classroom to the real world of clinical nursing, it is also a socialization process through which students are inducted into the practices, expectations and real-life work environment of the nursing profession (Lewin, 2007). The aim of clinical education is to develop the student professional skills and knowledge needed in life-long learning and critical thinking, to create self-confidence as a nurse, and to ensure that the nurse is able to make her own decisions and be independent (Tiwari et al, 2005).

According to Dunn and Burnett (1995) the student learning environment consists of all the conditions and forces within an educational setting that impact learning. Shuell, (1996 ) visualized the student learning environment as a rich psychological soup comprised of cognitive, social, cultural, affective, emotional, motivational and curricular factors, in which teachers and students work together toward learning. Without the correct environmental ingredients, it is very difficult to achieve a satisfactory learning product(Jecklin, 2000).

The learning environment plays a critical role in how students learn and in the quality of the learning outcome (Konings et al, 2005 and Hoffman and Donaldson, 2004). The learning environment for nursing students has been extensively investigated with a view to identify strengths and weaknesses, to monitor change at times of curriculum reform, to compare learning environments across teaching sites and to compare staff and students' perceptions (Pinnock et al, 2001).

CLE is defined as complex network of forces that are effective on clinical learning outcomes. In spite of classroom education, clinical education occurs in complex environment (Chan, 2007). Complexity of learning in clinical environment has caused researchers to investigate the impact of various factors on clinical learning such as quality of students' preparation for clinical experience, characters of clinical instructors, and learning opportunities provided for them. In addition the quality of clinical education provided by nursing instructors and the support received from the clinical personnel is the most influential factors in clinical learning of nursing student (Rahmani et al, 2011).

Sound educational practice requires a process for monitoring and evaluating the quality of student nurses' clinical placements. Accordingly, the Nursing Council of New Zealand requires college offering nursing programs to have a process for monitoring the quality of clinical learning environments. So, it states "An evaluation process for monitoring and evaluating the quality of the practice learning experience for students must exist". The Nursing Council of New Zealand does not stipulate how this should be monitored (Ako\_admin, 2010). However it would be useful for college of nursing to have a tool to evaluate students' perceptions of the quality of workplace learning environments in hospital and community settings. The use of an internationally validated tool would allow national and international comparisons. Until recently, no instruments for evaluating student nurses' workplace learning experiences in either hospital or community settings had been validated so the aim of the study is to measure the degree of effectiveness of clinical learning environment for nursing faculty students at Main Mansoura University Hospital.

#### **Significant of the study:**

This study has too important significance to provide accurate information to nursing faculty and administrators about the quality of the learning environment at all clinical sites used by a nursing program. Data from measuring the effectiveness of clinical learning environment could be used together with information from faculty and learning outcome assessments to make decisions about taking action to improve the clinical learning environment and to monitor the success of actions taken to improve both the quality of the learning environment and student learning outcomes.

#### **Study questions:**

- 1- To what extent the clinical learning environment standards are met in clinical areas for nursing faculty students at Mansoura university?
- 2- What is the degree of effectiveness of clinical learning environment for nursing faculty students at Main Mansoura university Hospital?

#### **Aim of the study:**

The aim of the present study is to measure the degree of effectiveness of clinical learning environment for nursing faculty students at Main Mansoura University Hospital.

#### **Subjects and methods:**

##### **Design:**

Cross-sectional analytical design was used in the present study

**Setting:**

The study is conducted in main Mansoura University Hospital that affiliated to Mansoura university teaching hospitals with total bed capacity 1860 beds with general and special units. The Main Mansoura University Hospital consists of units for general medicine, general surgery ,orthopedic, dialysis, neuro-surgery ,operating rooms for general surgery, obstetric and gynecological departments, and antenatal care units.

**Subjects:**

The subjects of present study include three groups namely students, clinical instructors and jury group.

**The first group;** named jury group, this group served to confirm validating the clinical learning environment standards for nursing faculty students at Mansoura university. It includes 24 academic nursing faculty staff at Mansoura University and 22 nurse managers from different Mansoura University Hospital settings whose sharing in training the faculty nursing' students.

**The second group;** called nursing faculty students, this group used to assess the clinical learning environment in their training areas. It includes all students available at the time of study and have their training in main Mansoura university hospital from different faculty levels and have different training programs related to their subjects as see in table (1) with total 247 students.

**The third group;** titled clinical instructors, who training students in Main Mansoura University Hospital from different faculty departments. It includes demonstrators and assistant lecturer making a total 58 subjects.

**Tools:**

Three tools were used for data collection namely; clinical learning environment standards opinionnaire sheet, clinical learning environment assessment questionnaire and clinical learning environment observational checklist. These tools developed by the researchers based on assessment of educational environment by Al-Ayed and Sheik (2008), aspects of environment affecting student learning by Cahn (2007) and clinical learning evaluation criteria by Jecklin (2000), development of clinical learning environment scale by Dunn and Burnett (1995).

**1- Clinical learning environment standards opinionnaire sheet:**

This tool aimed to confirm and validate the clinical learning environment standards. it is divided into two parts; the first part was related to the demographic characteristics of the jury group such as age, scientific degree, experience years and department. The second part was clinical learning environment evaluation standards which composed of 47 criteria under four clusters named; communication and feedback (8 criteria), learning opportunities ( 6 criteria), learning support (15 criteria) and clinical area atmosphere (18 criteria). all criteria of clinical learning environment evaluation were scrambled. For each of the 47 criteria, the jury member has to respond on the face validity ( does it look like a standard criterion), and its content validity ( is it achievable, observable, measurable, desirable, written in professional context, relevant to clinical learning environment, and its language is understandable). For each criterion, a score was calculated for validity based on summing up the number of agreements upon the seven content validity indicators. The sub-items with 60% agreement or higher was considered to agree upon and valid (Jecklin, 2000).

**2- Clinical learning environment assessment questionnaire (CLEEQ):**

This tool is used to assess clinical learning environment as perceived by nursing faculty students and their clinical instructors. It is divided into two parts; the first part was related to the demographic characteristics of the study subjects such as faculty degree, department, training subject for students, in addition, scientific degree, experience years and specialty for clinical instructors. The second part was clinical learning environment evaluation standards which developed and validated in the previous tool. It was measured the response of participants on five points likert scale ranging from strongly agree (5 points) to strongly disagree (one point).

**3- Clinical learning environment observation checklist (CLEOC):**

This clinical learning environment observation checklist used to assess the real clinical learning environment. It is used the same 47 criteria mentioned in the previous tools. It was measured by observing the clinical learning environment criteria and marked as fully met, partially met or not met. For each of the four standards, the number of criteria under each standard marked "fully met" were counted and their percentage was calculated by dividing their total by the total number of criteria of this standard. This was also done for the " partially met" items.

**II. Methods of data collection:**

- 1- Approval was obtained from the dean of nursing faculty, the director of main Mansoura University Hospital, the director of nursing service administration as well as the heads of nursing faculty departments.
- 2- The aim of the study explained to study subjects and verbal consent on participation was achieved.
- 3- Clinical learning environment evaluation questionnaire (CLEEQ) was handed over to everyone, it took about 20-30 minutes for fill it.
- 4- Pilot study was done on 15 students and four clinical instructors who were excluded from main study to test and to increase the validity and reliability of the clinical learning environment questionnaire and modifications were done.
- 5- The clinical learning environment standards formed the clinical learning environment assessment questionnaire and checklist which used in this study were reviewed for its face and content validity by jury group members.
- 6- Data collected from CLEEQ and CLEOC to assess the clinical learning environment in the real situation.
- 7- Comparing the assessment results with the specified standards to measure the degree of effectiveness of clinical learning environment for nursing faculty students at Mansoura university. The higher percent in clinical learning environment standards met through observation checklist means the higher effectiveness in clinical learning environment (Kube, 2010 and Hart, 2009).
- 8- Total time spent for data collection was four months starting September 2012.

**Statistical analysis:**

Data analyzed and summarized using percentages for categorical variables and mean and standard deviation for numerical variables. Data were presented using descriptive statistics in the form of frequencies and percentages for qualitative variables and mean and standard deviation for quantitative variables. Comparison of means was done using t-test for independent samples. For comparative purpose, score are presented as absolute values and as percentages from the maximum score of each topic. This maximum score depends on the number of items of each topic The threshold of statistical significance was p-value <0.05.

**Limitations of the study:**

The researchers selected the main Mansoura university hospital as a model of clinical learning environment because it has many departments which contributed to train different students from most of faculty departments. The clinical learning environment related to community health nursing, geriatric nursing and psychiatric nursing was not selected as the area of experience for the study because it was in different place where the researchers could not access.

**III. Results:**

**Table (1); The demographic characteristics of students group participated in the present study (n= 247)**

Demographic characteristics	Students group	
	No	%
<b>Age:</b>		
<20	121	48.98
20-22	94	38.05
>22	32	12.95
<b>Study year in nursing faculty:</b>		
First year	---	00.00
Second year	69	27.93
Third year	61	24.69
Fourth year	65	26.31
Internship year	54	21.86
<b>Clinical learning subject:</b>		
Medical-surgical nursing	34	13.76
Adults nursing	31	12.55
Obstetric and gynecological	57	23.07
Administration	59	23.88
Critical care	66	26.72
<b>Clinical learning department/unit:</b>		
General medicine	51	20.64
General surgery	48	19.43
Orthopedic	19	07.69
Dialysis	11	04.45
Neuro-surgery	22	08.90
General surgery operating rooms	18	07.28
Obstetric and gynecological	46	18.62
Antenatal care	32	12.95

Table (1) shows the demographic characteristics of students group participated in the present study. According the table, nearly half of students at age group less than 20 years. Regarding study year in nursing faculty, it appears that no any students from the first year, while the percent of student in second, third and fourth year nearly equal (27.93%, 24.69 and 26.86% respectively). According to clinical learning subject, although the percent of students studying obstetric and gynecological, administration and critical care are the highest and nearly equal (23.07%, 23.88% and 26.72% respectively), the lowest percent of students goes to medical surgical nursing and adults nursing which also nearly equal (13.76% and 12.55% respectively). As regard clinical learning departments and units, the highest percent of students had their training in general medicine units (20.64%), while the lowest percent presented in dialysis unit (4.45%).

**Table (2); The demographic characteristics of clinical instructors and jury group**

Demographic characteristics	Jury group (n=46)		Clinical instructors (n=58)	
	No	%	No	%
<b>Age:</b>				
< 25	--	--	15	25.86
25 - <30	3	06.52	34	58.62
30 - <35	19	41.30	9	15.51
35 - <40	13	28.26	--	--
>40	11	23.91	--	--
<b>Academic staff position:</b>				
Professor	3	06.52	--	--
Assistant professor	8	17.91	--	--
Lecturer	13	28.26	--	--
Assistant lecturer	--	--	23	39.65
Demonstrators	--	--	35	60.34
Director	1	02.17	--	--
Assistant director	3	06.52	--	--
Supervisor	6	13.04	--	--
Head nurse	12	26.08	--	--
<b>Experience years:</b>				
<5	1	02.17	16	27.58
5- <10	4	08.69	33	56.89
10 - <15	12	26.08	9	15.51
15 - < 20	9	19.56	--	--
>20	8	17.91	--	--

Table (2) shows the demographic characteristics of clinical instructors and jury group. Regarding the table, the highest percent of jury group (41.30%) at age group from 30 to less than 35 years while the lowest percent (6.52%) at age group from 25 to less than 30 years. In adverse with clinical instructors group, the most of them (58.62%) at age group from 25 to less than 30 years and the lowest percent goes to age group between 30 to less than 35 years. As regard, the most of jury group (54.16%) are lecturer followed by head nurse (26.06%) while the lowest percent (2.17%) goes to director. In addition, the highest percent (60.34%) of clinical instructors are demonstrators. According to the years of experience, the most of the jury group (26.08%) with experience years from 10 to less than 15 years while the lowest percent (02.17%) goes to jury group who have years of experience less than 5 years. In addition, the highest percent of clinical instructors (56.89%) with 5 to 10 years of experience .

**Table (3); Jury group agreement and validation of proposed clinical learning environment standards (n=44)**

Clinical learning environment standards	Mean rating score	Face validity
1- communication and feedback.	40.14	91.22%
2- learning opportunities	36.86	83.74%
3- learning support	41.71	94.79%
4- clinical area atmosphere	40.52	92.09%

Content validity index=89.67

Table (3) demonstrates jury group agreement and validation of proposed clinical learning environment standards. The content validity of all CLE standards was 89.67%. According the table, face validity of standards ranged between 83.74% and 94.79%. All clinical learning environment standards were agreed upon by more than three quarters of the jury group members. The highest agreement upon learning support 94.79 followed by clinical learning atmosphere 92.09% while the lowest agreement upon learning opportunities 83.74%.

**Table (4); Comparison between academic staff and nurse managers' agreement of proposed clinical learning environment standards.**

Clinical learning environment standards	Academic Staff (n=24)	Nurse Managers (n=22)	t	p
	M** ± SD	M** ± SD		
1- communication and feedback.	83.921±8.394	90.909±11.596	0.484	0.392
2- learning opportunities	78.583±10.476	84.092±9.587	1.756	0.069
3- learning support	90.496±8.901	90.859±9.195	0.677	0.995
4- clinical area atmosphere	89.688±9.716	86.375±10.911	1.516	0.093
<b>Total mean percentage from maximum score</b>	<b>84.834±3.764</b>	<b>87.304±4.239</b>	<b>0.344</b>	<b>0.627</b>

\*Significant  $p < 0.05$

\*\*Mean percentage from maximum score

Table (4) shows Comparison between academic staff and nurse managers' agreement of proposed clinical learning environment standards. Regarding the table, there was no statistically significant difference between academic staff and nurse managers agreement of clinical learning environment standards  $p = 0.627$ . The overall academic staff agreement on clinical learning environment standards was 84.834% of maximum score and 87.304% of maximum score for nurse managers. The highest mean percentage of maximum score of academic staff agreement 90.496% goes to learning support followed by 89.688% for clinical area atmosphere. While the highest mean percentage of maximum score of nurse managers agreement were nearly equally 90.909% and 90.859% for communication and feedback and learning support respectively. Also, the lowest mean percentage of maximum score 78.583% and 84.092% of academic staff and nurse managers agreement upon learning opportunities respectively.

**Table (5); Comparison between students group and clinical instructors group for assessment of fulfilling clinical learning environment standards**

Clinical learning environment standards	Students (n=247)	Clinical instructors (n=58)	t	P
	M** ± SD	M** ± SD		
1- communication and feedback.	93.610 ± 6.287	80.341±3.866	2.867	0.011*
2- learning opportunities	90.111 ± 10.332	97.566±5.720	1.852	0.053
3- learning support	86.463 ± 5.991	90.374±8.897	2.059	0.071
4- clinical area atmosphere	92.747 ± 7.040	96.803± 6.661	1.023	0.078
<b>Total mean percentage from maximum score</b>	<b>89.692±2.201</b>	<b>90.016±2.820</b>	<b>0.241</b>	<b>0.094</b>

\*Significant  $p < 0.05$

\*\*Mean percentage from maximum score

Table (5) explores comparison between students group and clinical instructors group for assessment of clinical learning environment. Regarding the table, there was no statistically significant difference between the perception of the two groups(  $p=0.094$  ). the overall students assessment of fulfilling of clinical learning environment standards was 89.692 of maximum score where as 90.016 for clinical instructors. There was a statistically significant difference ( $p=0.011$ ) between the assessment of students and clinical instructors of fulfilling of communication and feedback standards (93.610% and 80.341% of maximum score respectively). In the table, the highest maximum score 93.610% followed by 92.747% of fulfilling communication and feedback standards and clinical area atmosphere standards respectively as assessed by students. While, the highest maximum score 97.566% followed by 96.803% of fulfilling learning opportunities and clinical area atmosphere respectively as assessed by clinical instructors. Also, students assessed the lowest mean percent of maximum score 86.643% for fulfilling of learning support standards while communication and feedback standards had the lowest mean percent of maximum score 80.341% as assessed by clinical instructors.

**Table (6); Observation of clinical learning environment standards which actually met by clinical instructors in clinical area (n=58)**

Clinical learning environment standards	Fully met		Partially met		Not met	
	No	%	No	%	No	%
1- communication and feedback.	5	8.62	21	36.21	32	55.17
2- learning opportunities	6	10.34	9	15.52	43	74.14
3- learning support	11	18.97	17	29.31	30	51.72
4- clinical area atmosphere	8	13.79	13	22.41	37	63.79

Table (6) shows observation of clinical learning environment standards which actually met in clinical area. From the table, the most of the standards are either partially met or not met. The percentage of fully met standards was the lowest percentage and ranged between 8.62% to 18.97 %. Moreover, the highest percentage of CLE were not met. And, learning opportunities standards was not met with the highest percent 74.14% as illustrated in the table.

**Table (7); comparison between assessing of clinical learning environment standards as perceived by students and clinical instructors with these observed by the researchers.**

Clinical learning environment standards	Students and clinical instructors perception	Observation by the researchers	t	p
	M** ± SD	M** ± SD		
1- communication and feedback.	85.742±2.839	62.874±5.404	2.231	0.010*
2- learning opportunities	93.988±4.764	44.290±8.307	3.755	0.003*
3- learning support	88.033±3.860	54.022±3.729	2.030	0.001*
4- clinical area atmosphere	93.796±2.535	48.308±3.063	3.426	0.001*
<b>Total mean percentage from maximum score</b>	89.831±1.483	54.005±1.942	2.894	0.001*

\*Significant  $p < 0.01$

\*\*Mean percentage from maximum score

Table (7) illustrates comparison between assessing of clinical learning environment standards as perceived by students and clinical instructors with these observed by the researchers. According the table, there was a statistically significant difference between assessing of clinical learning environment standards as perceived by students and clinical instructors with these observed by the researchers  $p=0.001$ . The overall observed met standards was 54.005% while 89.831 was met as perceived by students and clinical instructors. In the table, the highest maximum scores (93.988%, 93.796%) were nearly equal for learning opportunities and clinical area atmosphere respectively as perceived by students and clinical instructors. As for clinical learning environment standards assessed by the researchers, the standards were met in range between 44.290% for learning opportunities standards and 62.874% for communications and feedback standards.

#### IV. Discussion:

Within nursing, there is a strong demand for high-quality, cost-effective clinical education experiences that facilitate student learning in the clinical setting. The clinical learning environment (CLE) is the interactive network of forces within the clinical setting that influence the students' clinical learning outcomes. The identification of factors that characterize CLE could lead to strategies that foster the factors most predictive of desirable student learning outcomes and ameliorate those which may have a negative impact on student outcomes. Furthermore, Dunn and Burnett (1995) emphasized that measuring the degree of effectiveness of clinical learning environment will assist in the application of resources in a cost-effective, efficient, productive manner, and will ensure that the clinical learning experience offers the nursing student the best possible learning outcomes. In addition, Gamil and Ali (2012) stated that measurement of effective teaching has been accomplished through students and faculty evaluation. Evaluation of clinical demonstrators' behavior in the clinical settings plays an important role in the effective clinical teaching process for both students who is seeking knowledge and competent, and also for the demonstrator who is seeking competence and doing good job. So the present study aimed to measure the degree of effectiveness of clinical learning environment for nursing faculty students at Main Mansoura university Hospital.

In the present study, almost all of jury group agree and validate face and content of the clinical learning environment standards with high percent to judge about practicability and applicability of the standards for clinical learning environment. This could be contributed to the wording and languages of the standard are clear and findings pointed to the importance that these standard must involving in the clinical learning environment for nursing faculty students at Mansoura university. The result of the present study revealed that the highest percent of their agreement on learning support standards, which includes the importance of; availability of clinical instructors, provide adequate guidance with new skills by instructor and nursing staff, students feel support in attempts at learning new skills and students help each other. while the lowest percent of their agreement goes to learning opportunities. This is congruent with the sector skills council for lifelong learning, which affiliated to Lifelong Learning United Kingdom (LLUK) (2007), it is established lifelong learning standards and criteria which include provide high quality learning support that enables learners to achieve identified goals, engage learners in activities that advance learning for individuals and groups, develop and maintain effective relationships with learners that promote learning, communicate effectively with learners, use, adapt and/or develop resources that support learners' needs, provide support that builds on learners' experience, learning preferences and levels of independence and encourages learners to work independently and evaluate and improve the effectiveness of own practice, identify own professional development and training needs, and take steps to address these. Furthermore, Nursing and Midwifery Council (NMC) (2011) supported this finding and emphasized that learning support framework involves eight domains which are; establishing effective working relationships, facilitation of learning, assessment and accountability, evaluation of learning, creating an environment for learning, context of practice, evidence-based practice and leadership.

In the same interest (Saarikoski et al., 2008) stated that the clinical learning environment scale can be used as a part of the total quality assessment of nurse education as perceived by student nurses in Finland

In the present study, there was no statistically significant difference between academic staff and nurse managers agreement of clinical learning environment standards. The overall academic staff agreement on clinical learning environment standards goes to learning support followed by clinical area atmosphere. It appeared in that clinical instructor gives trainees' students adequate orientation in the department, maintained responsibility for student assigned patient, ensured that the needed equipment, supplies and resources are available. While the highest mean percentage of maximum score of nurse managers agreement were nearly equally for communication and feedback and learning support. This may be due to clinical instructor provided adequate guidance and gave supporting in attempt teaching new skills. Also, the lowest mean percentage of maximum score of their agreement went to learning opportunities. This may be due to there are difficult of finding wide range of learning opportunities available at site, lack of encouragement to identify/pursue learning opportunities, there are difficult to allowed more independence for student with increased skills also student not meet the most learning goals. Morris (2007) confirmed this point of view and concluded that students and trainees appreciate; structured learning opportunities with clear objectives, having a legitimate role, opportunities for hands on work and to assume increasing levels of responsibility, being supervised and receiving feedback and enthusiastic and approachable teachers.

There are no statistically significant difference between the perception of the students and clinical instructors regarding assessment of clinical learning environment. This may be due to that the educator and students have similar point of view related to affectively relevant factors in the CLE, direct resources to areas where improvement may be required, and nurture those areas functioning well. It will assist in the application of resources in a cost-effective, efficient, productive manner, and will ensure that the clinical learning experience offers the nursing student the best possible learning outcomes. This finding supported by Rahmani ,et al (2011) who found that the quality of learning was affected by the quality of the students preparation, characteristics of the instructor, and the variety of clinical opportunities to which students were exposed.

The result of the present study explored that there was a statistically significant difference between the assessment of students and clinical instructors of fulfilling of communication and feedback standards. As regard, students assessed fulfilling communication and feedback standards followed by clinical area atmosphere standards as the highest mean percentage of maximum score. While, the highest mean percentage of maximum score revealed in clinical instructors assessment of fulfilling learning opportunities followed by clinical area atmosphere. This may be due to instructors served as positive role models and provide constructive feedback for their students. In this respect, Kilminster et al (2007), Cote and Leclere (2000) and Snell et al (2000) mentioned that effective role models are clinically competent, possess excellent teaching skills, and have personal qualities, such as compassion, sense of humor and integrity. They added that effective supervisors give feedback and provide guidance, involve their students in patient care, and provide opportunities for carrying out procedures.

In the same concern, the study done by Saarikoski and Leino-Kilpi (2002) to describe students' perceptions of the clinical learning environment and clinical supervision found that the method of supervision, the number of separate supervision sessions and the psychological content of supervisory contact within a positive ward atmosphere and the supervisory relationship are the most important variables in the students' clinical learning. They also suggested that ward managers can create the conditions of a positive ward culture and a positive attitude towards students and their learning needs. Also according to Rahmani et al (2011) who confirmed that students' perceptions of their clinical learning environments in community settings had high mean score which provide evidence that students have high perceptions of connection with a community of clinical practice, their nurse teacher, their supervisory relationship, and the learning opportunities in the community of clinical practice. In addition, the results of Ghodsbin and Shafakhah (2008) showed that in viewpoint of nursing students, non-cooperation of nursing staff was the main hindering factor in clinical education.

From observation of clinical learning environment standards which actually met in clinical area, the most of the standards are either partially met or not met. This may be due to mismanagement of time by staff, there is no enough number of clinical instructors available for training in addition to high clinical instructors workload. In the same concern, Salmani and Amirian (2005) showed that 77% of nursing students believed that the quality of their CLE was moderate. In addition assessment of the CLE of nursing students, few studies were conducted in Iran. For example, Shahbazi and Salimi (2000) revealed that nursing students were not satisfied with their CLE. Also, Zaighami et al. (2004) reported that many of Iranian nursing students viewed their CLE as inappropriate. Moreover, the present study finding explored that the most of CLE standards were not met with highest percentage. In the same line, Zahraei et al (2008) stated that problem of nursing students in clinical teaching was lack of attention to students' individualization. Also, they revealed that from the perspective of nursing students and instructors, individualization is one of the most important characteristics of effective clinical instructors.

Regarding learning opportunities standards, the present study illustrated that the standard was not met by clinical instructors with the highest percent. This means there are a need for clinical learning improvement. Again, all of these findings reflected the importance of support from clinical personnel in clinical education. Rahmani et al (2011) confirmed this point of view.

From the result of the present study there was a statistically significant difference between assessing of clinical learning environment standards as perceived by students and clinical instructors with these observed by the researchers. The highest mean percentage of maximum scores were nearly equal for learning opportunities and clinical area atmosphere respectively as perceived by students and clinical instructors. This may be due to atmosphere was not highly conducive to learning and needed equipment, in addition, supplies and resources were not available. In the same respect, Jan et al (2006) stated that factors affecting student learning include quality of student preparation, characteristics of instructors, characteristics of units, peer support, past clinical experiences, physical resources, learning opportunities, availabilities of staff, opportunities to practice interpersonal and technical skills, and overall student perceptions. Also, Davies (1993) mentioned that providing opportunities for students to work closely with role models will result in the acquisition of a realistic understanding of the skills and demands required within the work environment. In addition, Khorsandi and Khosravi (2002) found that problem of nursing student was that their task was not clear in clinical settings and the main problem of nursing students in clinical setting was unspecified task orientation.

As for clinical learning environment standards observed by the researchers, less than half of learning opportunities standards are met by clinical instructors. In this respect, student nurses in the study by Bezuidenhout T, (1999) were particularly dissatisfied with the lack of opportunities to practise a particular skill, and insufficient exposure to learning opportunities. Student nurses also identified those factors that negatively affected the conduciveness and effectiveness of the learning environment. These were, being reprimanded in front of others, mismanagement of time by staff, lack of involvement as part of the nursing team, lack of demonstration and teaching by professional nurses in the ward lack of teaching and learning facilities such as books and posters, poor interpersonal relationships among staff members. In addition, the finding of the present study illustrated that clinical instructors met nearly two third of communications and feedback standards. This may be due to clinical instructor focused in clinical teaching on a foundation of the skills needed to be an effective communicator to nursing students, also teach students how to be effective communicators themselves. This relationship is characterized by open communication, mutual trust and respect between the students and clinical instructors. In this respect, Schubert, (2008) stated that effective communication is essential in conveying information, establishing relationships, building rapport, and ensuring the safety of the patient.

## **V. Conclusion and Recommendations:**

Complexity of learning in clinical environment has caused researchers to investigate the impact of various environmental factors on clinical learning improvement. The quality of CLE is a valid indicator to show the quality of nursing curriculum.

The present study explored that the developed clinical learning environment standards considered as the essential part of learning process which can affect learning outcomes of nursing students at Faculty of Nursing, Mansoura University.

Therefore, assessment of CLE is a duty of nursing education administrators.

Based on the finding of the present study, the following recommendations were developed:

- 1-Systematic and continuous evaluation as well as staff development should be the primary goal for the faculty evaluation process. The ultimate goals is to improve training skills by nurse educators.
- 2-Nurture positive relationships and collaborate with clinical instructor, students and hospital staff in the practice environment
- 3-Be highly visible in practice. Visibility of lectures in practice is recognized as having an impact on the confidence of students being able to put their learning into practice.
- 4-Ensure clinical instructor involvement in monitoring practice and assessment of student competence.
- 5-Encourage, reassure and support students to escalate concerns surrounding clinical practice learning environments to ensure concerns are reported sooner, "students need to feel they are free to whistle blow without fear of victimization".
- 6-Implement mandatory evaluation from placement areas which can assess their experiences.
- 7-Facilitate classroom reflection on the learning achieved in the clinical learning environment.

## **References**

- [1]. Ako\_admin. Evaluating the Quality of Workplace Learning for Nursing Students in Community Settings. 2010. Available at: <http://ako.aotearoa.ac.nz/ako-hub/ako-aotearoa-southern-hub/resources/pages/evaluating-quality-workplace-learning-nursing-student>
- [2]. Al-Ayed I.H. and Sheik S.A.(2008)Assessment of the educational environment at the College of Medicine of King Saud University. Riyadh Eastern Mediterranean Health Journal.14(4); 953-59.

- [3]. Astin F, Newton J, McKenna L, Moore-Coulson L. Registered nurses' expectations and experiences of first year students' clinical skills and knowledge. *Contemp Nurse*. 2005;18(3):279–91.
- [4]. Bezuidenhout T., chapter 4 Data analysis, categories and literature control. 1999. Available at; <http://search.important.com/SearchTheWeb/v6/1033/homepage/Default.aspx>
- [5]. Chan D. Perception of hospital learning environment: a survey of Hong Kong nursing students. *Nurse Educ. Today*. 2007;27(7):677–84.
- [6]. Cote L. and Leclere H. How clinical teachers perceive the doctor-patient relationship and themselves as role models. *Acad Med*. 2000;75(11):1117–1124.
- [7]. Davies E. Clinical role modeling. Uncovering hidden knowledge. *J Adv Nurs.*, 1993;18:627-36.
- [8]. Dunn S. and Burnett P. The development of a clinical learning environment scale. *J Adv Nurs*. Dec 1995;22(6):1166-73.
- [9]. Fluit C. Bolhuis S. Grol R. Laan R and Wensing M. Assessing the Quality of Clinical Teachers. A Systematic Review of Content and Quality of Questionnaires for Assessing Clinical Teachers *Gen Intern Med*. December, 2010; 25(12): 1337–1345.
- [10]. Gamil W. and Ali W. Caring and Effective Teaching Behavior of Clinical Nursing Instructors in Clinical Area as Perceived by Their Students. *Journal of Education and Practice*. 2012; 3(7):15-26.
- [11]. Ghodsbin F. Shafakhah M. Facilitating and Preventing Factors in Learning Clinical Skills from the Viewpoints of the Third Year Students of Fatemeh School of Nursing and Midwifery. *Iranian Journal of Medical Education*. 2008;7(2):343–52.
- [12]. Hart, J. Attributes of effective clinical instructors as perceived by students in accelerated and traditional BSN nursing programs. A published Master's thesis, Northern Kentucky University, 2009. Masters Abstracts International. Available at; <http://www.csm.edu/wfdata/files/Academics/Library/InstitutionalRepository/12.pdf>
- [13]. Hoffman KG, Donaldson JF ( 2004): Contextual tensions of the clinical environment and their influence on teaching and learning. *Med Educ*. 2004;38:448–454. <http://www.nzma.org.nz/journal/124-1334/4658/CNZMA>
- [14]. Infante M, Makarem S. Teaching effectiveness and learning outcomes of baccalaureate nursing students in a critical care practicum: A Lebanese experience. *Nursing Outlook*, 2001; 49:43-49.
- [15]. Jan K. and Kelly M. Pearls and pitfalls of a new graduate academic residence program. *Journal of Nursing Administration*. 2006; 3(12):589-598.
- [16]. Jecklin K. Evaluating the Student Clinical Learning Environment: Development and Validation of the SECEE Inventory EdD, MSN, RN Southern Online Journal of Nursing Research. 2000; 4(1). Available at; [www.snrs.org](http://www.snrs.org)
- [17]. Khorsandi M. and Khosravi H. Evaluation of clinical education from the viewpoint of Nursing Students of Arak in 2001. *Journal of Medical Sciences (Harvard knowledge)* 2002;5(1):29–52.
- [18]. Kilminster S. Cottrell D. Grant J. and Jolly B. AMEE Guide No. 27: Effective educational and clinical supervision. *Med Teach*. 2007;29(1):2–19
- [19]. Konings K. Brand-Gruwel S. and Merrienboer J. Towards more powerful learning environments through combining the perspectives of designers, teachers and students. *Br J Psychol. Medicine*. 2005;75:645–660.
- [20]. Kube M. The Relationship of Nursing Faculty Clinical Teaching Behaviors to Student Learning A published dissertation for the degree of doctor in education, College of Saint Mary. 2010. P 15. Available at; <http://www.csm.edu/wfdata/files/Academics/Library/InstitutionalRepository/12.pdf>
- [21]. Leach D. Changing education to improve patient care. *Qual. Health Care*. 2001;10(2):1154–1158.
- [22]. Lewin D. Clinical learning environment for student nurses: Key indices from two studies compared over a 25 year period. *Nurse Education Practice*, 2007; 7:238-246.
- [23]. Lifelong Learning United Kingdom LLUK. National Occupational Standards (NOS) for the role of learning support practitioner in the lifelong learning sector. The Sector skills council for lifelong learning. Skills for learning professionals. Skills for Business, 2007. Available in 22/5/2013 at; <http://dera.ioe.ac.uk/2332/1/lspnosdraft.pdf>
- [24]. Liimatainen I. Poskiparta M. and Sjgren A. Student nurse and reflective health promotion learning in hospital, department of health sciences university of Juvaskyl, Finland. paper presented at the European conference on educational research, Lahti, Finland. 1999; 22-25 .
- [25]. Morris C. Integrating teaching and learning into clinical practice. 2007; Available in 22/5/2013 at; [http://www.faculty.londondeanery.ac.uk/e-learning/assessing-educational-needs/Integrating\\_teaching\\_learning\\_into\\_clinical\\_practice.pdf](http://www.faculty.londondeanery.ac.uk/e-learning/assessing-educational-needs/Integrating_teaching_learning_into_clinical_practice.pdf)
- [26]. Nursing and Midwifery Council (NMC). Standards to support learning and assessment in practice. NMC standards for mentors, practice teachers and teachers. Protecting the public through professional standards. 2011. Available in 22/5/2013 at; [http://www.ed.ac.uk/polopoly\\_fs/1.50824!/fileManager/StandardstoSupportLearningandAssessmentinPracticeNMC.pdf](http://www.ed.ac.uk/polopoly_fs/1.50824!/fileManager/StandardstoSupportLearningandAssessmentinPracticeNMC.pdf)
- [27]. Pinnock, R. Shulruf, B. Hawken, S. Henning, M and Jones, R (2011): Students' and teachers' perceptions of the clinical learning environment in years 4 and 5 at the University of Auckland. *Journal of the New Zealand Medical Association*. (NZMJ). 13 May 2011; 124(1334): 63. Available at;
- [28]. Rahmani A. Zamanzadeh V. Abdullah-zadeh, F. Lotfi M. Bani S. and Hassanpour S. Clinical learning environment in viewpoint of nursing students in Tabriz University of Medical Sciences. *Iran J Nurs Midwifery Res*. 2011;16(3):253 – 256.
- [29]. Saarikoski M. and Leino-Kilpi H.
- [30]. Saarikoski M. Isoaho H. Warne T. and Leino-Kilpi H. The nurse teacher in clinical practice: Developing the new sub-dimension to the clinical learning environment and supervision (CLES) scale. *International Journal of Nursing Studies*. 2008; 45( 8):1233-1237.
- [31]. Salmani N. and Amirian H. Comparison of nursing students and instructors view Azad University of Yazd on the status of clinical education environment. *Strides in Development of Medical Education*. 2005;3(1):11–8.
- [32]. Salsali M. Evaluating teaching effectiveness in nursing education: An Iranian perspective *BMC Med Educ*. 2005; 5: 29.
- [33]. Schubert M. University of Pittsburgh School of Nursing. preceptor nursing preceptor program. 2008. Available at; <http://www.nursing.pitt.edu/academics/ce/precept/preceptorship.jsp>
- [34]. Shahbazi L. and Salimi T. Attitudes of nursing and midwifery students on clinical status. *Journal of Shahid Sadoughi University of Medical Sciences And Health Services*. 2000;8(2):97–103.
- [35]. Sheehan K. About Clinical Instructors Evaluating Nursing Students. 2010; by eHow Contributor updated: May 31 <http://www.scribd.com/doc/5099287>
- [36]. Shuell T. Handbook of educational physiology. (1996) ; in K . Jecklin 2000. Evaluating the Student Clinical Learning Environment: Development and Validation of the SECEE Inventory EdD, MSN, RN Southern Online Journal of Nursing Research; 4(1). Available at; [www.snrs.org](http://www.snrs.org)
- [37]. Snell L. Tallett S. and Haist S. A review of the evaluation of clinical teaching: new perspectives and challenges. *Med Educ*. 2000;34(10):862–870.

- [38]. The clinical learning environment and supervision by staff nurses: developing the instrument .International Journal of Nursing Studies. 2002;39(3):259-267. Available at; <http://www.ncbi.nlm.nih.gov/entrez/eutils/elink.fcgi?cmd=prlinks&dbfrom=pubmed&retmode=ref&id=11864649>
- [39]. Tiwari L. Rose Y. and Chan C. Student learning in clinical nursing education: Perceptions of the relationship between assessment and learning nurse education, Nurs. Educ. Today, 2005; 34(9):299-308.
- [40]. Zahraei H. Sokhan A. Salehi S. Ehsanpour S. Hassanzadeh A. Comparing the Factors Related to the Effective Clinical Teaching from Faculty Members' and Students' Points of View. Iranian Journal of Medical Education. 2008;7(2):249-56.
- [41]. Zaighami R. Faseleh M. Jahanmiri S. and Ghodsbin F. Nursing student's viewpoints about the problems of clinical teaching. The Journal Of Qazvin University Of Medical Sciences. 2004;30.