IOSR Journal of Nursing and Health Science (IOSR-JNHS
e-ISSN: 2320–1959.p- ISSN: 2320–1940 Volume 6, Issue 2 Ver. V (Mar. - Apr. 2017), PP 112-119
www.iosrjournals.org

Internship Nurses' Satisfaction with Clinical Learning Environment in Intensive Care Unit

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Abstract

Background: *Integration of nursing theory into practice is a vital concern of educational organization. Satisfied clinical environment influences not only educational goals, but also affect nurse students' choices of future career. Intensive care unit is appreciated learning environment which allow a great chance for internship nurses to get training through internship year. Intensive care unit is a multidimensional unit which has a straight influence on the conclusions of internship nurses ' clinical training. Understanding these dimensions is the first step toward enhancing learning and training to ensure safety and quality of patient care.* ***Objective****: To assess internship nurses' satisfaction with clinical learning environment in intensive care unit.* ***Method :*** *One hundred internship nurses who received training in three selected Intensive care units of Teaching Main University Hospital, Alexandria, Egypt. Intensive care units were Causality Care Unite I, General Intensive Care Unit II, and General Intensive Care Unit III.* ***Tool:*** *"Clinical Learning Environment, Supervision and Nurse Teacher (CLES + T) evaluation scale" tool was used. The period of study was from April 2016 to October 2016.* ***Results :*** *the present study showed that the majority of internship nurses were in the age group from 20 to 29 years old (90%), female (83%), and single (70%), as well as more than half of them (64 %) had experience from 1 to 5 years in Intensive care units. There was significant relation between the overall general internship nurses' satisfaction and all of the studied clinical learning environment dimensions (p = 0.00 for all dimensions). Internship nurses perceived that pedagogical atmosphere was the most important* dimension *in clinical learning environment while leadership style of Intensive care unit manager was the least one. In addition, high percent of internship nurses with age below 20 years perceived dimension of premises of nursing in ICU as the most vital dimension (P=0.001) while internship nurses with age from 20 to 29 years perceived dimension of nurse preceptor role as the most vital one (P=0.001). Furthermore, a significant correlation between internship nurses' experience of working in Intensive care units and both clinical learning environment dimensions of nurse preceptor role (p=0.003) and supervisory relationship (p=0.04).* ***Conclusions:*** *Internship nurses were generally satisfied with clinical learning environment dimensions. Moreover, significant relation between internship nurses' socio-demographic data of age, gender, marital status with their satisfaction with the five clinical learning environment dimensions.* ***Recommendations:*** *Nurse preceptor should provide internship nurses with regular feedback on their strengths and weaknesses. Further study is needed to investigate the impact of clinical learning environment improvement on INs' performance.*

Key words: *clinical learning environment, nurse intern, preceptor, satisfaction, supervisor.*

I. Introduction

Nursing is a clinical founded field so integrating theoretical nursing with practice is the key of professional progress. For accomplishing this integration and obtaining intended learning outcomes, an accommodating clinical environment is needed which is important for transporting knowledge in practice basis. It was documented that clinical learning is a vital part of nursing curriculum. Based on this clinical learning importance, nursing program of Bachelor of Science contained course of internship training through a final year. This course is related to different specialty of nursing such as medical, surgical, critical care, pediatric, and obstetric. Internship nurses (INs) are student nurses who will be trained clinically through these specialties.[(1)]

Concerning critical care nursing, intensive care units can ascertain to be appreciated learning environment permitting INs to take part in care of critically ill patient demanding basic and advanced nursing care. [(2)] Smedley [(3)] defined clinical learning environment (CLE) in nursing as learning derived from situations or learning inside the actual environment. Additionally, Chan [(4)] documented that CLE, as a multidimensional unit which has a straight influence on the conclusions of nurse intern clinical training. Clinical engagements provide INs with a chance to practice nursing in actual reality and perfectly enable nurse intern to place theory into training. It was advised that nursing program success is greatly dependent on competence of clinical training. Several evidences advocated that ICU clinical environment consists of many aspects including educational atmosphere, premises of nursing in ICU, leadership style of ICU manager, and preceptor & supervisor roles. [(5)]

Concerning educational atmosphere, it reflects the accessibility to the unit staff, interest in intern nurses' supervision and presence of meaningful & multidimensional learning situation. Also, it helps INs to feel comfortable going to ICU and taking part in the discussion during nursing round. For premises of nursing in ICU, it concerns availability of a clearly defined nursing philosophy, individualization of nursing care and presence of a clearly defined ICU protocols. Moreover, hospital and university coordination should be attained to achieve the intended learning objective. This may affirm a harmony of tasks and concerns between hospital goals and educational ones.[(6)] Regarding contributing roles in learning process, supervisor role in ICU is particularly influential. Not only they supervised nursing staff members, but also serve as role-models for nursing practice.[(7)] Otron [(8)], Fretwell [(9)] described the influence of the nurse supervisor in determining the attitude of staff toward intern nurse and the quality of teaching which nurse intern encounters during the clinical experience ,and concluded that nurse supervisor were pivotal figures in generating and commanding clinical learning environment. Regarding preceptor role, they are nurse teachers, who defined by Borrageiro [(10)] as a qualified nurse teacher employed by faculty. Their role includes setting the learning goals, enabling integration of theory and practice, supervision, giving constructive feedback, etc.

It is approved that if INs experience disadvantaged care environments and poor quality of nursing care, they may develop undesirable approach to critically ill patients' care. Also, it is expected that a good learning environment will enhance nurse intern training. On the other hand, an encouraging work and learning environment seems to be essential in attracting nurses' recruitment in ICU later on. [(11,12)] However, some researches displayed that the CLE is a significant element with reference to learning goals, [(13,14)] we found few studies describing the clinical learning environment in ICU specifically, and we debate that this is necessary considering the ever increasing need to recruit and retain nurses to critically ill patients' care. Understanding aspects involving in clinical learning environment is the first step toward enhancing learning and training to ensure safety and quality of patient care. Therefore, we achieved this study to assess the most important aspects influencing internship nurses' satisfaction of clinical learning environment of ICU which can lead to improve learning, patient safety, diminish improper nursing practices that impact patient morbidity and mortality, and decreasing cost of patient care.

The aim of this study is to assess internship nurses' satisfaction with clinical learning environment in intensive care unit

Research questions: What are the most important aspects influencing internship nurses' satisfaction of their clinical learning environment in intensive care unit?

II. Materials and Method

Design: A descriptive research design was used.

Setting: The study was conducted in three intensive care units (ICUs) in Teaching Main University Hospital, Alexandria, Egypt. ICUs are Causality Care Unite I, General Intensive Care Unit II, and General Intensive Care Unit III.

Patients: One hundred internship nurses who received training in the previously mentioned setting and willing to participate in the study were included. This estimation is based on the power analysis (Epi Info program V7.0).

Tool: One tool was used: **"**Clinical Learning Environment, Supervision and Nurse Teacher (CLES + T) evaluation scale". It was developed by Saarikoski et al. [(15)] It is used to assess CLE from INs' point of view, supervision and the role of nurse preceptor within ICU. The scale composed of 5 subscales which included 34

items regarding aspects involved in clinical learning environment. The five subscales are: pedagogical atmosphere (9 items), leadership style of ICU manager (4 items), premises of nursing care in ICU (4items), supervisory relationship (8 items) and nurse teacher role in clinical area (9 items). INs were asked to how much they believe these items affect CLE using a three points Likert type scale with three values; satisfied=3, nearly=2 and dissatisfied=1. Additionally, data were collected on INs' sociodemographic data including sex, age, marital status, experience of work in private ICU.

Tool preparation, validity and reliability

The tool CLES + T scale was translated into Arabic language. Content validity of the tool was tested by 5 experts in the field of critical care and emergency nursing and necessary modifications were done. The subscales' reliability values of these factors measured by Cronbach's coefficient Alpha, in which the internal consistency reliability ranged from 0.729 to 0.936, while the statistical significance level was $p < 0.05$.

Pilot study

A pilot study was carried out on 10 intern nurses to evaluate the clarity and applicability of the tool and necessary modifications were done when needed. These nurses were excluded from the studied sample.

Method:

The questionnaire was introduced to internship nurses at break time of morning and evening shift after securing their consents and clarifying purpose of the study. Data was collected through a self-reported method. Time needed to complete the tool ranged from 15 to 20 minutes. Data of the study was collected from April 2016 to October 2016.

Ethical consideration:

Data collection took about 7 months from April 2016 to October 2016. An official permission to conduct the study was obtained from "head of Critical Care & Emergency Nursing Department", and "Nursing Ethical Committee" of Nursing Faculty- Alexandria University and hospital authority "Medical Ethical Committee" after explaining the aim of study. Intern nurses were informed that sharing in that study was voluntary. Written consent to participate in the study was obtained from them. The anonymity and confidentiality of responses were emphasized to intern nurses.

Statistical analysis of the data

Data were fed to the computer and analyzed using IBM SPSS software package version 20. Analysis and interpretation of data were done using the followings; Frequency, mean and standard deviation. Comparison between two independent population were done using independent t-test while more than two population were analyzed F-test. P is significant if ≤ 0.05.

III. RESULTS

Table 1 illustrated the demographic characteristics of the studied intern nurses (INs). The table shows that the majority of INs were in the age group from 20 to 29 years old (90%), female (83%), and single (70%), as well as more than half of them (64 %) had experience from 1 to 5 years in ICU.

Table 2 illustrates the relationship between general satisfaction of INs measured by total CLES + T scale with the five subscales of CLES + T. There was significant relation between the overall general satisfaction and all of the subscales dimensions ($p = 0.00$).

Table 3 illustrates INs' perception toward clinical learning environment (CLE) in ICU. INs perceived that pedagogical atmosphere was the most first important dimension in CLE (mean percent score = 81.47±14.2) with reference to that 95% of INs were satisfied with calling them by their personal name plus 78% of them found both sufficient meaningful learning situations on ICU and enough clinical learning opportunities for their needs. In addition, low percent (37%) of INs reported feeling comfortable at the start of their shift in ICU. While, the leadership style of ICU manager dimension that was perceived as the least essential CLE one (mean percent score = 74.8 ± 25.1). About half of INs agreed that ICU manager appreciates nurses' effort (60%) and their feedback could easily be considered a learning situation (52%).

Table 4 reveals relationship between INs' socio-demographic data with the five dimensions of CLE dimensions. The table revealed that significant relation between INs' socio-demographic data of age, gender, marital status with their satisfaction with the five CLE dimensions. For age, the high percent of INs with age below 20 years perceived CLE dimensions of premises of nursing in ICU as the most vital dimension (P=0.001) while INs with age from 20 to 29 years perceived CLE dimensions of nurse preceptor role as the most vital one (P=0.001). Regarding gender, there was a significant relation as high percent of male INs agreed that supervisory relationship dimension was the most important CLE dimension. (P=0.003). Furthermore, this study showed significant correlation between nurses' experience of working in ICU and both CLE dimensions of nurse preceptor role (p=0.003) and supervisory relationship (p=0.04).

Table (1): Distribution of the studied nurses according to socio-demographic characteristics (n=100).

socio-demographic characteristics		No.	%
Age	<20	9	9.0
	20 – 29	91	91.0
Sex	Male	17	17.0
	Female	83	83.0
Marital status	Single	77	77.0
	Married	23	23.0
Experience of work in private ICU	Yes	64	64.0
	No	36	36.0

Table 2: Correlations between general satisfaction measured by overall CLES + T scale with subscales of CLES+T

Satisfaction items score	Significance test	Subscales of CLES+T scale				
		Pedagogical atmosphere	leadership style of ICU manager	Premises of nursing in ICU	Nurse preceptor role	Nurse Supervisor role
Overall CLES+T scale	R	0.843	0.784	0.773	0.769	0.808
	P	0.000	0.000	0.000	0.000	0.000

r: Pearson coefficient *: Statistically significant at $p \leq 0.05$

Table (3): Distribution of clinical learning environment dimensions according to internship nurses' satisfaction

CLES+T scale	Satisfied		Neutral		Dissatisfied		Total score Min. – Max. Mean ± SD.	Percent score Min. – Max. Mean ± SD.
	No.	%	No.	%	No.	%		
Pedagogical atmosphere							15.0 – 27.0 23.7 ± 2.6	33.3 – 100.0 81.7 ± 14.2
I feel comfortable going to the ICU at the start of my shift.	37	37.0	43	43.0	20	20.0		
The staff calls me by my personal name.	95	95.0	5	5.0	0	0.0		
I feel that staff was interested in my supervision as an intern nurse	44	44.0	48	48.0	8	8.0		
I felt comfortable taking part in discussion during nursing round.	76	76.0	22	22.0	2	2.0		
The staff was easy to approach.	45	45.0	53	53.0	2	2.0		
The learning situations were multi-dimensional in terms of content	72	72.0	28	28.0	0	0.0		
There were sufficient meaningful learning situations on ICU.	78	78.0	20	20.0	2	2.0		
I have enough clinical learning opportunities for my needs	78	78.0	20	20.0	2	2.0		
The leadership style of ICU manager							4.0 – 12.0 9.9 ± 2.0	0.0 – 100.0 74.8 ± 25.1
ICU manager regards the staff on his/her ICU as a key resource	55	55.0	37	37.0	8	8.0		
ICU manager acts as a team member	67	67.0	19	19.0	14	14.0		
ICU manager feedback could easily be considered a learning situation.	52	52.0	42	42.0	6	6.0		
ICU manager appreciates nurses' effort.	60	60.0	32	32.0	8	8.0		
Premises of nursing on ICU							6.0 – 12.0 10.3 ± 1.5	25.0 – 100.0 78.8 ± 18.4
ICU philosophy is clearly defined.	54	54.0	40	40.0	6	6.0		
Individualized nursing care is provided	56	56.0	44	44.0	0	0.0		
Nursing documentation is clear.	62	62.0	36	36.0	2	2.0		
The flow of information related to patient's care is easy.	70	70.0	26	26.0	4	4.0		
Role nurse preceptors							11.0 – 27.0 22.9 ± 3.9	11.1 – 100.0 77.6 ± 21.9
Preceptors are capable of integrating theoretical knowledge and everyday practice of nursing	64	64.0	26	26.0	10	10.0		
Preceptors are capable of making plans to achieve the learning objectives.	65	65.0	25	25.0	10	10.0		
preceptors encourages me to be an independent learner	61	61.0	28	28.0	11	11.0		
preceptors are like a member of the nursing team	47	47.0	43	43.0	10	10.0		
My preceptors are enthusiastic	67	67.0	29	29.0	4	4.0		
My preceptors and the clinical team work together to support my learning experience.	64	64.0	27	27.0	9	9.0		
Preceptor is able to give his or her expertise to the nursing team.	65	65.0	33	33.0	2	2.0		

My preceptor has good communication with health care team.	78	78.0	20	20.0	2	2.0		
My preceptors provide me with regular feedback on my strengths and weaknesses.	62	62.0	16	16.0	22	22.0		
Supervisory relationship4							10.0 – 24.0 20.5 ± 3.1	12.5 – 100.0 77.8 ± 19.6
I feel that I receive individual supervision	66	66.0	33	33.0	1	1.0		
I continuously receive feedback from my supervisor	70	70.0	22	22.0	8	8.0		
I am satisfied with the supervision I receive	52	52.0	40	40.0	8	8.0		
Supervision was based on a relationship of equality and promote my learning	66	66.0	22	22.0	12	12.0		
There is a mutual interaction in the supervisory relationship	66	66.0	32	32.0	2	2.0		
The supervisory relationship is characterized by a sense of trust	59	59.0	31	31.0	10	10.0		
I have good clinical supervision at all time	52	52.0	32	32.0	16	16.0		
Supervision enhance an atmosphere of mutual respects	82	82.0	7	7.0	11	11.0		

Table (4): Distribution of the studied internship nurses according to their socio-demographic characteristics in relation to clinical learning environment dimensions

	Pedagogical atmosphere		**leadership style of ICU manager**		**Premises of nursing in ICU**		**Nurse preceptor role**		**Nurse Supervisor role**	
	Mean	**± SD.**	**Mean**	**± SD.**	**Mean**	**± SD.**	**Mean**	**± SD.**	**Mean**	**± SD.**
Age										
<20	78.4	12.3	62.5	19.8	88.9	4.8	80.5	19.8	83.3	8.8
20 – 29	81.9	14.4	75.9	25.3	77.8	18.9	48.8	23.7	77.3	20.3
t(p)	0.7 (0.5)		1.5 (0.1)		4.6* (0.001*)		4.5* (0.001*)		1. 7 (0.1)	
Sex										
Male	79.1	11.7	77.2	15.5	84.6	12.1	76.5	15.7	85.3	7.3
Female	82.2	14.7	74.3	26.7	77.6	19.3	77.8	23.1	76.3	20.9
t(p)	0.8(0.4)		0.6 (0.5)		1.9 (0.1)		0.2 (0.8)		3.1* (0.003*)	
Marital status										
Single	82.1	14.9	74.4	23.9	79.7	18.6	78.4	19.9	75.8	23.9
Married	80.2	11.9	76.1	29.2	75.5	17.9	75.8	18. 8	83.6	12.7
t(p)	0.7 (0.6)		0.3(0.8)		0.9(0.3)		0.6(0.6)		2.04* (0.04*)	
Experience of work in private ICU										
Yes	82.8	15.3	74.8	25.7	76.8	16.9	73.7	25.8	80.8	19.6
No	79.6	12.1	74.7	24.2	82.3	20.6	84.6	9.8	72.6	18.6
t(p)	1.1(0.3)		0.03(0.9)		1.5(0.1)		3.01* (0.003*)		2.04* (0.04*)	

t, p: t and p values for **Student t-test** F,p: F and p values for **ANOVA test**

*: Statistically significant at $p \leq 0.05$

IV. Discussion

The current results largely revealed that internship nurses' (INs) satisfaction with their clinical learning environment (CLE) was significantly related to all of the subscales CLES + T dimensions. This means that internship nurses accomplishing clinical practice in ICU expressed a rich established philosophy of nursing, individual patient care is given, an uncomplicated data flow and accurate well documentation of nursing practices. These findings are in agreement with previous ones concluding largely, internship nurses estimated the CLE positively, [16-18] as well as other relevant studies documented that high percent of nurse students were satisfied with their clinical experience.[19-21]

It is a surprising result of the present study that high percent of INs were satisfied with pedagogical atmosphere of ICU as the most first important dimension in CLE although ICU is a huge source of stressor. This means that INs were able to take part in the discussion during nursing round and having enough clinical learning opportunities for their needs. Additionally, they experienced that ICU staff was easy to approach, deal friendly with them as calling them by their personal name, and generally interested in their supervision as an intern nurse plus INs found sufficient meaningful learning situations on the ICU. These results were in line other Sundler *et al.*'s [22] and Magnani *et al.*'s [6] studies results. On the other hand, low percent of INs reported feeling comfortable at the start of their shift in ICU. This may be due to INs' point of view, CLE is the greatest anxiety aggravating element related to education of nursing. [23]

Regarding the leadership style of ICU manager, it is a form of organizational support that is needed and helpful when INs' pre-existing knowledge and skills are inadequate for clinical practice [24] High percent of INs in this study were dissatisfied with the leadership style of ICU manager dimension and perceived it as the least essential CLE one. This can be explained by that ICU manager support remained less than INs' expectation. INs wasn't respected, appreciated and didn't receive feedback from ICU manager. Cowie *et al.* [25] approved that ICU managers are not directly involved in clinical teaching or in the supervision of nursing students but responsibilities for allocating clinical placements for nursing students. Bezuidenhout *et al.* [26] added that leadership within nursing is based upon the ability to influence the staff toward the achievement of goals through motivation and support. In addition, it was approved that high level of satisfaction has been reported when students had the nurse manager ensuring that their learning needs were addressed as she was well updated.[27]

About nurse preceptor role, the current study revealed that some INs dissatisfied with this role. They found nurse preceptor didn't provide them with regular feedback on their strengths and weaknesses. This result was augmented by Levett-Jones et al [28] who approved that students need feedback and to maintain open communications with their faculty trainers. Researches [29,30] revealed that nurse preceptor is considered to be a nurse who is in charge for alert designing of the practical placements, and hence consistent appointments improved INs' practical experience because those appointments confirmed that intended learning outcomes were successfully completed in exact approach.

Moreover, the present study showed that high percent of INs in age group less than 20 years and without experience found nurse preceptor role was significantly important for them. This can be due to that they were unprepared psychologically and had a sense of still attaching completely to their faculty and needed support from it. Unexperienced INs considered ICU setting as a new stressful clinical one. This was accepted by several relevant studies which documented that the nurse preceptor role effective, especially in stressful situations. Sundler *et al.*[31] concluding that a nurse preceptor had a direct influence on INs' satisfaction with CLE. Moreover, inexperience results in fear of making mistakes, feeling of incompetent and low self-confidence. This result was accepted by Edwards *et al.* [32] and Joolaee *et al.* [33] who demonstrated that inadequate self-confidence is a great problem for new nurses causing feeling of anxiety and fear.

While these results demonstrated that high percent of married INs in the age group from 20 to 30 years plus who with experience of work in ICU were satisfied with nurse supervisor role significantly and considered it important CLE dimension for them. This is attributed to INs' familiarity with ICU setting as well as meeting and caring for critically ill patients. Additionally, it was expected that these INs exposed to situational problems and gained experience from solving. Therefore, it was easier for these INs to approach the staff with questions without being judged as less competent. This is in line with Dornan *et al.* [34] who concluded that experienced students have the probability to deal with nurse supervisor more than other students. In addition, Van der Zwet *et al.* [35] found that experienced students fell more trust and the supervisor let them to take care of patients more independently.

V. Conclusion

It can be concluded that there was significant relation between the overall general INs' satisfaction and the entire studied CLE dimensions. Additionally, high percent of INs were satisfied with pedagogical atmosphere of ICU although ICU is a stressful environment as they able to have enough clinical learning opportunities for their needs. While high percent of INs were dissatisfied with Leadership style of ICU manager which needs to be improved. Moreover, some INs dissatisfied with nurse preceptor role. In the same time high percent of INs in age group less than 20 years and without experience found nurse preceptor role was significantly important for them. Additionally, high percent of married INs in the age group from 20 to 30 years with experience of work in ICU were satisfied with nurse supervisor role significantly and considered it important CLE dimension for them.

VI. Recommendations

Nurse manager in ICU should be more cooperative with faculty to facilitate leaning for attaining positive intensive care internship nurses' perception and satisfaction with ICU environment. This will increase nurses' recruitment in ICU later on. Nurse preceptor should provide internship nurses with regular feedback on their strengths and weaknesses. Further study is needed to investigate the impact of clinical learning environment improvement on intern nurses' performance.

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