

# Evaluation of Nursing student's viewpoints on the actual status and expected status of the clinical education environments of Guilan University of medical sciences in the academic year 2017-2018

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## ABSTRACT

**Introduction:** Clinical education is considered as the most important part of nursing student's education. At this stage, students acquire theoretical knowledge by educating in the clinical environment. **Objective:** The objective of this research was to evaluate the actual status and expected status of clinical education environments from the viewpoint of nursing students of Guilan University of Medical Sciences. **Methods:** In this descriptive-analytical type of cross-sectional study, 147 nursing students studying in second to eighth semester (bachelor level) of Nursing School of ShahidBeheshti faculty participated. The reliable and valid research tool of CLEI (Clinical Learning Environment Inventory) was used in this research to collect data. It was provided to 147 nursing students under clinical education in hospitals and health centers in Rasht. Results were analyzed using SPSS 16 software and descriptive and inferential statistics. **Results:** The mean score of student's attitudes was 54.13 in the actual status and 68.85 in the expected status, which the difference was 14.7%. The Wilcoxon test, used to compare the score of the actual status with that of expected status separately for domains, indicated that the difference between the two statuses was significant in all domains ( $P < 0.001$ ). **Conclusion:** significant difference between the expectations and the realities of the clinical education environment from the viewpoint of nursing students suggests the necessity of reviewing the planning process and implementation of clinical education programs with an emphasis on creativity and individualization.

**Keywords:** Nursing education, clinical education environment, nursing students Introduction.

## Introduction

Nursing education is considered as one part of higher education. During this period, students learn the nursing science through formal education during four years and learn the professional activities and tasks in theoretical and clinical education [1].

Nowadays, modern nursing education uses various models,

which all of them consider clinical education as a main component of nursing education. In this regard, nursing education planners consider clinical education as the main part of nursing education and argue that nursing students can develop their theoretical knowledge by performing the tasks in the clinical environment [2]. The most dissatisfaction with the education from the point of view of nursing students also relates to clinical education [3]. Clinical education is affected by many variables, which can be discussed in three domains of the factors related to educator, learner, and educational environment [4]. Studies show that the most effective domain in the clinical education quality is the "clinical environment" domain. This rich psychological environment encompasses all conditions and factors influencing the learning. It includes social, cultural, cognitive, emotional, motivational and educational factors [5]. Clinical environment is helpful in development of students at dimensions of knowledge, attitude and psychomotor skills to improve problem-solving skills, critical thinking and

### Access this article online

Website: [www.japer.in](http://www.japer.in)

E-ISSN: 2249-3379

**How to cite this article:** Zahra Bakhshi, Saghi Moosavi, Atefeh Ghanbari. Evaluation of Nursing student's viewpoints on the actual status and expected status of the clinical education environments of Guilan University of medical sciences in the academic year 2017-2018. *J Adv Pharm Edu Res* 2019;9(S2):98-102.

**Source of Support:** Nil, Conflict of Interest: None declared.

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professional and clinical competencies [7]. In addition, from the nursing students' point of view, clinical learning environment is one of the most effective educational factors for nursing skills and knowledge [8].

Henderson also argue that an effective clinical education requires the integration of nursing students with activities of unit, the interaction of staff to guide the student's individual learning needs and innovative teaching methods. He also argues that evaluating the characteristics of the clinical education environment can provide useful insights for development [9]. In fact, an effective educational system is reviewed constantly from theoretical and practical aspects and work conditions in order to meet the actual and future needs of the community, so continuous education and providing the work environment in accordance with requirements of clients and nursing experts can help planners reduce the gap between theoretical and practical courses and provide the condition for more application of educational content [10].

Thus, improving the quality of nursing education requires continuous reviewing of the actual status to resolve the weaknesses and students, who are receiving the educational services, are the most important source for identifying educational problems, and as the role of an optimal clinical education is undeniable in individual and professional development and clinical nursing skills, continuous evaluation of the clinical education status from the viewpoint of students, who have more tangible relationship with the clinical education problems, seems to be necessary in order to identify and improve clinical education problems and improve the quality of care services [3]. Pugnier argues that assessing the student's perception and their satisfaction with the educational experience is critical for medical professors, since it improves the educational performances [11].

Student's learning in clinical education environment is considered as essential part of education. In addition, evaluating nursing student's viewpoints on this environment plays a major role in increasing their motivation [3]. One of the most important goals of clinical education is to reduce the gap between the real clinical environment and the expected clinical environment [1]. Any difference between the real and expected clinical environment might result in reduction in their interest in clinical environments and a reduction in clinical practice, which this difference might have a significant negative impact on students' clinical learning [12]. Thus, nursing education authorities should assess the educational status from student's viewpoint in order to improve quantity and quality of clinical education.

## Methodology

In this descriptive-analytical (comparative) study, the inclusion criterion of study included having the clinical experience by nursing students studying in second to the eighth semester of educational centers of Guilan University of Medical Sciences (Rasht) in the academic year of 2017-2018, and the exclusion

criterion of study included lack of willingness to participate in the study. Therefore, 147 students from the second to eighth semester participated in the study using census method. A valid and reliable tool was used in this study. It includes two sections, the first section of which provides questions about the personal and educational characteristics of students such as age, gender, academic year, GPA, and internship place

### B: CLEI clinical learning environment inventory

It assesses the nursing student's views and perceptions of psychosocial characteristics of actual and expected clinical learning environment. It includes 37 items in 6 domains.

These domains include:

1. personalization: Emphasis on opportunities for personal interaction between a student and an instructor about aids and concerns.
2. Satisfaction: the degree of pleasure of the clinical environment.
3. Task orientation: the extent to which the activities of a unit are clear and organized.
4. Use of educational innovations: the extent that each instructor plans for interesting and innovative experiences, training the techniques and activities related to patient.
5. Individualization: the extent to which opportunity is given for students to make decision and they are treated differently in accordance to their abilities and interests.
6. Student's involvement: The extent to which each student is actively and involved in the activities.

Each of the positive items was measured in four-option Likert scale ranging from completely agree (Score 4), agree (Score 3), disagree (Score 2) and completely disagree (Score 1), and negative items are scored reversely. Thus, the highest score was 148 and the lowest score was 37.

Validity and reliability of the questionnaire including 42 questions were confirmed by CVI and CVR. The obtained values were found to be between 0.49-0.62 based on the Lawshe table. The CVI index, which relates to relevance, simplicity, and clarity of items, was found above 0.8 for each of the questions. Thus, the CVI values of all questions that were in the range of 0.8 and 0.9 were not reviewed and the questions with the CVI values of above 0.9 were not modified. Therefore, no question was deleted.

In order to determine the research tool reliability, external consistency and Cronbach's alpha coefficient were used. After removing the questions 2-22-32-37-42, Cronbach's alpha coefficient was obtained 0.7, 0.7, 0.76, 0.7, 0.7, 0.769, and 0.867 for first domain, second domain, third domain, fourth domain, fifth domain, sixth domain, and in general, respectively. The number of questions was reduced from 42 items to 37 items. For the external consistency of the tool, the Test Re test was used. It was obtained 88%, 89.7%, 93.5%, 87.7%, 72%, 87.2%, and 91% for first domain, second domain, third domain, fourth domain, fifth domain, sixth domain, and in general, respectively. After collecting the ethics code from Deputy of Technology Research of Guilan University of Medical Sciences in Rasht, data were collected during one month. Data analysis was performed using SPSS software (version 16) and using descriptive statistics (frequency

distribution, mean) and analytical methods (Wilcoxon and Spearman correlation coefficient tests).

## Results

In this study, 55.1% of samples were female and 44.9% were male. Most of the students (26.5%) have completed the third semester and majority of them (51.7%) had completed the internal surgery unit courses. The mean age of the samples was  $21.8 \pm 3$ . The mean score of nursing students' viewpoints on the actual status of clinical education environments is  $54.1 \pm 10.44$  with median of 54.1 and confidence interval of 95%. This value in the expected status is  $68.5 \pm 12$  with a median of 68.5 and a confidence interval of 95% (Table 1). Comparison of actual and expected status scores separately for domains by Wilcoxon test showed a significant difference among all domains in the expected status and actual status ( $P < 0.001$ ) (Table 2).

Chart 1 also shows the difference between these two statuses based on the percentage and separately for domains and in general status. According to the data of this chart, the greatest difference of scores related to domains of using educational innovations, individualization, satisfaction and task orientation. In general, the difference between the expected status score and the actual status score was 14.7%.

Spearman correlation coefficient in the difference between the scores of actual and expected clinical education environments from the viewpoint of nursing students in all domains showed that there is a positive statistical correlation (between 0.367-0.666). The results showed that educational semester has a significant correlation only with scores of actual and expected status in the domain of using educational innovations ( $r = 0.228$ ) ( $P = 0.006$ ), indicating that the difference increases as educational semester increases.

In general, the relationship of educational semester with difference of total scores in actual status and the expected status was significant ( $r = 0.160$ ,  $P = 0.05$ ). However, the age of the samples according to the Spearman test did not have any significant correlation with the difference between the actual and the expected statuses separately for domains and in general. Gender showed significant relationship with task orientation ( $P = 0.28$ ), ( $P = 0.15$ ). In general, the difference between the scores of the actual and expected statuses in these two domains was more in females than that in males.

The place of internship has a significant relationship with the use of educational innovations ( $P = 0.34$ ). In this domain, the difference between the actual and expected statuses was highest in intensive care units and the lowest in the clinic. Generally, the difference between the actual and expected statuses scores from the student's viewpoints of clinical education environments was not statistically significant in terms of gender and internship place.

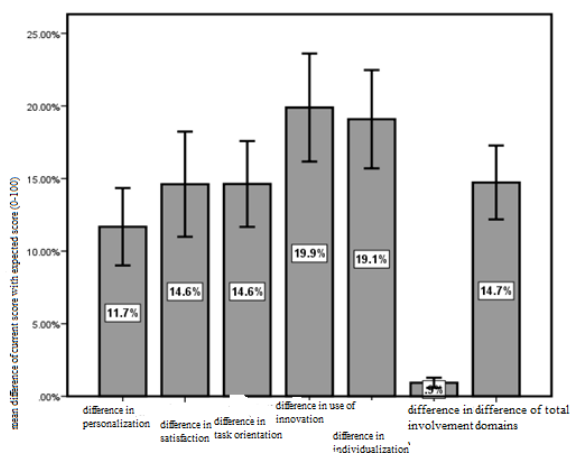
**Table 1: Nursing students' mean score on the actual and expected statuses of clinical education environment**

	Percentage of actual status	Percentage of expected status
mean	54/13	68/85
SD	10/40	12/05
median	54/05	68/47
min	27/03	44/14
max	90/09	94/59
95% Upper CI for Mean	55/82	72/82
95% Lower CI for Mean	52/43	66/89

**Table 2: comparison of scores of expected and actual statuses separately for domains**

	n	mean	Sum squares	P
The scores of actual and expected statuses from the students viewpoints on clinical education environments in personalization domain	Actual score more than expected score	18	43/33	780
	Expected score more than actual score	98	61/29	6006
	equal	31	-	-
	Total samples	147	-	-
The scores of actual and expected statuses from the students viewpoints on clinical education environments in satisfaction domain	Actual score more than expected score	29	36/17	1049
	Expected score more than actual score	94	69/97	6577
	equal	24	-	-
	Total samples	147	-	-
The scores of actual and expected statuses from the students viewpoints on clinical education environments in task orientation domain	Actual score more than expected score	14	34/82	487/50
	Expected score more than actual score	98	59/60	5840/50
	equal	35	-	-
	Total samples	147	-	-
The scores of actual and expected statuses from the students viewpoints on clinical education environments in educational innovations domain	Actual score more than expected score	22	33/80	743/50
	Expected score more than actual score	110	73/04	8034/50
	equal	15	-	-
	Total samples	147	-	-
The scores of actual and expected statuses from the students viewpoints on clinical education environments in individualization domain	Actual score more than expected score	14	30/07	421
	Expected score more than actual score	113	68/20	7707
	equal	20	-	-
	Total samples	147	-	-

The scores of actual and expected statuses from the students viewpoints on clinical education environments in involvement domain	Actual score more than expected score			
	Expected score more than actual score	35	43/97	1539
	equal	34	-	-
	Total samples	147	-	-



**Chart 1:** difference between actual status and expected status based on percentage and separately for domains and in general

## Discussion

Based on the findings of this study, there is a significant difference between the expected status and actual status of clinical education environments in all six domains from the nursing student's viewpoint. It means that students expect that clinical education environment to have a higher level of personalization, involvement, satisfaction, and knowledge of task orientation and the use of educational innovations compared to the level they are experiencing. Manuchehri et al (2016) and Papathanasiou(2014) confirm this result, especially in the domains of the use of educational innovations and individualization [13, 14]. It is in line with the result of the research conducted by Henderson (2012) [9]. The lowest difference between two statuses in the domain of students' involvement suggests that students are satisfied with the method of involvement in the clinical education environment. The highest difference between the actual status and the expected status with regard to domain of using educational innovations suggests that the studied students believe that creativity is not adequate in the actual status of clinical learning environments, and innovation is not at the appropriate level in clinical education while the use of a combination of lectures, practical exercises, films and instructional pamphlet for training have contributed to the positive results [15]. However, factors such as staff shortage, economic restrictions, and increased clinical demand may prevent providing such experiences and new methods [16]. The results in the domain of individualization have shown that this domain is one of the most important

characteristics of the clinical instructor from the student's viewpoint .

## Conclusion

Differences in students' viewpoint of actual status and the expected status of clinical education environments emphasize the need to improve the status of clinical education by employing skilled clinical instructors, providing more facilities, and students' involvement in clinical decision-making processes.

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