The gap in the clinical learning environment: The viewpoints of nursing students

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Abstract:

INTRODUCTION: The clinical environment is an essential and irreplaceable resource in preparing nursing students for their professional role. Despite many changes that occur in the clinical learning environment (CLE), these environments remain important to nurse training. With regard to the importance of students' viewpoints in the evaluation of CLE, this study was performed to the determination of nursing students' viewpoint of the actual and preferred CLE at Bushehr University of Medical Sciences in Iran 2013.

MATERIALS AND METHODS: In this cross-sectional analytic study, due to the small size of the research population, all nursing students (86 students) of Bushehr University of Medical Sciences in Iran who had passed at least one clinical course were selected through the census. Participants were invited to complete anonymously the actual and preferred Farsi versions of the CLE Inventory consisting of 42 items originally developed by Professor Chan (2001). Data were analyzed using frequency distribution, mean, standard deviation, and paired *t*-test.

RESULTS: The results indicated that there were significant differences between students' perceptions of the actual and the preferred CLE ($P < 0.001$). The highest and lowest mean scores of actual CLE belonged to student involvement and individualization, respectively, and the highest and lowest mean scores of preferred CLE belonged to task orientation and individualization, respectively.

CONCLUSION: In general, students prefer a more positive CLE than what they actually have experience and would prefer an environment with higher levels of clarification of personalization, student Involvement, satisfaction, task orientation, innovation, and individualization.

Keywords:
Clinical education, clinical learning environment, clinical learning, nursing students

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Introduction

In recent years, interest and concern over the role of the learning environment in medical students' education are increasing.[1-3] The mission of medical universities in empowering graduates to take on critical job roles is particularly sensitive. In this regard, the medical profession as an integral part of the human resources of the health system, plays an important role in promoting community health. Clinical education planning is an essential part of medical education in developing students' abilities and skills in these disciplines, and any problems in clinical education make the effectiveness of this part of education difficult.[4] Clinical education is an essential aspect of the health science curriculum, and its benefits are the transformation of a beginner learner into a competent caregiver. Unlike classroom education, clinical education occurs in a complex social environment.[5-8]

Nursing is a profession based on experience and practice.[9,10] Clinical work forms an integral part of the nursing education curriculum, so the environment in which practical work is devoted is an essential part

of the student learning experience, but it is difficult to control this environment.[9-12] The clinical environment encompasses all conditions and stimuli that affect learning. This rich psychological environment is made up of cognitive, social, cultural, emotional, motivational, and educational factors.[8,13] Effective clinical learning requires engaging nursing students in clinical activities interaction of staff to meet student learning needs and developing innovative educational approaches.[14] Undergraduate nursing students spend a significant portion of their education in clinical learning settings, but this is not in itself a guarantee of the adequacy of education because many variables including student, clinical instructor, ward staff, and environmental factors affect learning outcomes. These factors must also be identified and evaluated to ensure that the clinical environment is useful and effective in learning.[15]

Clinical education provides students with the opportunity to transform their theoretical knowledge into the various mental, psychological, and motor skills necessary for patient care.[16] Therefore, students as recipients of educational services are the best source for identifying clinical education problems because they have direct and immediate interaction with this process.[17-19] The clinical learning environment (CLE) is central to many of the nursing studies. As shown in research conducted in Australia, England, Hong Kong, Italy, and Iran, there is a statistically significant difference between students' actual and preferred views.[5,20-22] While more than two decades of student education at Bushehr University of Medical Sciences, nursing students' views of CLE have not been evaluated so far, to this end, and considering the importance of understanding the clinical teaching environment in preventing adverse outcomes, which in itself leads to failure to meet the educational goals and training of skilled people to improve the level of care services, conducting research to determine the viewpoints of nursing students of medical sciences university from the CLE, so maybe by this means for realistic planning to empower nursing students and to upgrade the level of care provided by educational planners and provide an appropriate environment for education.

Materials and Methods

This research is a descriptive-analytical study that was done in a cross-sectional manner during the first semester of 2013 in which the researcher studied nursing students' views of the actual and preferred CLE at Bushehr University of Medical Sciences in Iran. The study population consisted of all nursing students of Bushehr University of Medical Sciences who had completed at least one clinical course in the clinical setting during the study. Exclusion criteria were student attendance

as a guest or transfer from other medical universities in the country.

In this study, due to the small of the study population, all nursing students of Bushehr University of Medical Sciences who had passed at least one clinical course were enrolled in the census. The sample size was 86 (sample size is equal to the total population under study), and statistical analysis was performed on these 86 individuals.

The data collection tool was a self-administered questionnaire consisting of two parts, demographic information (gender, age, and semester), and a CLE Inventory (CLEI) is a valid and reliable tool for assessing students' understanding of the CLE. The data collection tool developed by Chan and has two actual and preferred versions (42 items each).[23] In the actual version, actual students' perceptions of the CLE, and in the preferred version, the preferred or ideals students' perceptions of the CLE that may not actually exist are measured. The questionnaire consists of six indexes and 42 items (seven items for each index) with a 5-point Likert rating scale (strongly disagree to strongly agree), which are described in Table 1.

For the purposes of this study, required permission to use the CLEI was obtained from its original developer through E-mails. To gain scientific validity of the data collection tool, the researcher besides library studies and reviewing books and journals and researches by different researchers, after translating the questionnaire to Persian, the opinions of 10 experts (professors involved in clinical nursing education) and one professor of English language lesson were used, and its content validity was determined. Cronbach's alpha coefficient of the

Table 1: Description of each index of the clinical learning environment inventory

Indexes	Indexes description	Items
Personalization	Emphasis on opportunities for individual student to interact with preceptor and on concern for student's personal welfare	1, 7, 13, 19, 25, 31, 37
Student involvement	Extent to which students participate actively and attentively in ward activities	2, 8, 14, 20, 26, 32, 38
Satisfaction	Extent of enjoyment of clinical placement	3, 9, 15, 21, 27, 33, 39
Task orientation	Extent to which ward activities are clear and well organized	4, 10, 16, 22, 28, 34, 40
Teaching innovation	Extent to which preceptor plans new, interesting, and productive ward experiences, teaching techniques, learning activities, and patient allocations	5, 11, 17, 23, 29, 35, 41
Individualization	Extent to which students are allowed to make decisions and are treated differently according to ability or interest	6, 12, 18, 24, 30, 36, 42

questionnaire was obtained from a randomized group of 15 eligible students by using SPSS version 16.0(SPSS Inc, Chicago, IL, USA) o obtain scientific reliability and reliability of the data collection tool. To gain scientific reliability of data collection tools, the Cronbach's alpha coefficient of the questionnaire was obtained by conducting a guided study in a random group of 15 eligible students using SPSS version 16.0 equal to 0.79.

Thereafter, the study was performed according to the approval of Ethics Committee of Bushehr University of Medical Sciences (NO: 20-18-3-11118). Students were informed that their anonymous responses would be used for further planning of CLE. It was emphasized that the students' participation in the study was entirely voluntary. In the clinical setting, with permission from the relevant instructor and providing the necessary information about the aims and the way of conducting the research to the students, the questionnaire was provided to the study units in one step by the researcher which was completed in the presence of the researcher.

For the use of statistical methods, the levels in the questionnaire were scored, such that in positive statements were scored on the basis of a 5-point Likert scale ranging from strongly agree (5) to strongly disagree (1), and each invalid response scored 3, while negative statements were scored in a reverse manner.

The data were analyzed using descriptive (absolute and relative frequency distribution, mean and standard deviation) and inferential statistics (paired *t*-test) through SPSS version 16 (SPSS Inc., Chicago, IL, USA).

Results

Out of 86 students, most of them (59.3%) were female and the mean age was 21.38 ± 2.29, which majority of them (33.7%) were 21 years old, and the least of them (2%) were 24 and 40 years old. Most of the studied subjects (36%) were in semester three, and the least (31.4%) were in semester five.

From the students' point of view, the highest and lowest mean scores for the actual CLE were related to student involvement and personalization, respectively, and the highest and lowest mean scores for preferred CLE were for task orientation and personalization, respectively. On the other hand, there was a significant difference between students' perceptions of the actual and preferred environment in terms of CLE indexes, with the highest difference being related to the task orientation index, and the least difference being to the student involvement index [Table 2].

Paired *t*-test with 99% confidence interval ($P < 0.001$) confirmed that there was a significant difference between students' overall view of actual and preferred CLE so that the preferred version had a higher mean (4.53 ± 0.37) than the actual version (3.48 ± 0.40).

Discussion

In this study, the perspective of nursing students from an actual and preferred CLE in Bushehr University of Medical Sciences in 2013 has been studied.

Analysis of the findings showed that student involvement was the highest priority in an actual CLE, reflecting the fact that nursing students felt that the student involvement aspect was good in their CLE. Although this index was a high priority in previous studies by Serena and Anna, and Chan, but did not rank for the most important index in the actual CLE for nursing students (second rank).[20,21,23] Perhaps, the reason for this discrepancy is the existence of an intimate atmosphere due to the smaller clinical environment and the reduction of cultural differences between students and working nurses and clients of the university's educational centers following recent policies to localize nursing students.

The results also showed that personalization has the lowest mean score for students in the actual CLE, which is in line with the findings of Brown *et al.*, Serana and Anna, and Chan.[20,21,23,24] As a result, students in the existing CLE have little opportunity to plan their activities according to their abilities.

The results of the present study are similar to those of Brown *et al.*, in that, the index of task orientation had the

Table 2: Mean difference between the actual and preferred version of clinical learning environment inventory for nursing students*

Indexes	Mean (SD)		Mean difference	Statistical test		
	Actual version	Preferred version		*t*	df	*P*
Personalization	3.77 (0.54)	4.73 (0.49)	0.96	−11.11	85	<0.001
Student involvement	3.81 (0.58)	4.50 (0.58)	0.69	−7.30	85	<0.001
Satisfaction	3.65 (0.74)	4.80 (0.42)	1.15	−12.81	85	<0.001
Task orientation	3.50 (0.69)	4.82 (0.41)	1.132	−15.29	85	<0.001
Innovation	3.17 (0.53)	4.38 (0.59)	1.21	−13,78	85	<0.001
Individualization	2.98 (0.65)	3.94 (0.58)	0.96	−9.9	85	<0.001

*P<0.05 significant. SD: Standard deviation

highest mean score in the preferred version of the CLE.[24] This is a fact that students prefer to be in environments where their tasks are clearly defined.

Individualization had the lowest mean score for students in the preferred CLE. The results of the present study are similar to the findings of Rezaei *et al*., Brown *et al*., Serena and Anna, Midgley, and Chan.[20-25] It is important to note that this index did not have a high priority over the preferred CLE in the present study, like the actual CLE, which indicates that there is no need to worry about this indicator because students' view of individualization has not been a factor that can affect their learning and that it is more important than other indexes of the CLE.

The results also showed that there is a significant difference between students' perceptions of the actual and preferred environment in terms of CLE indexes, with the highest difference being related to task orientation index and the least difference being related to student involvement index. This result is in line with the results obtained in the study of Serena and Anna.[20]

The greater difference of opinion in the task orientation index between actual and preferred CLE indicates that the students in this study had the highest expectations in the field of this index, which is consistent with the findings of Serena and Anna, and Chan findings.[20,21,23] This points to the importance of this index in terms of students and the need for further development and support in this area. In a study conducted by Zaighami *et al*., nursing students stated that the most important problem of clinical education is the lack of clear task descriptions in the department.[26] This indicates that there is a problem in this field in CLEs, which should be considered by planners in the field of education.

On the other hand, the concept of less difference of opinion in the student involvement index between actual and preferred CLE means that students' expectations were not far from what they experienced in the actual environment and students were relatively satisfied with participating in the activities of the department actively and accurately. This finding is consistent with the findings of Serena and Anna, and Midgley.[20,21,23] It seems that the reason for this relative satisfaction, as mentioned, is due to the intimate atmosphere that prevails in the educational centers of Bushehr University of Medical Sciences.

In this study, there was a significant difference between students' general view of the actual and preferred CLE, so that the preferred version had a higher mean than the actual version. This finding was similar to the findings of studies by Chan, Midgley, Chan and Iep, Serena and Anna, and Brown *et al*.[5,20-23,25,27] In this regard, Rezaei *et al*. in a

study conducted on nursing students of Arak University of Medical Sciences state that the low score of the actual view over the preferred view shows that students expect that clinical environments participate in terms of personalization, satisfaction, task orientation, teaching innovation, and individualization is in a better position.[25]

One of the limitations of this research is the lack of generalizability of the results of this research to nursing students of other universities due to the small number of participants and conducting research in one university. Therefore, it is recommended that more research be conducted with more students and in other areas that may have different social and educational norms.

The findings were limited to the study of nursing students' views on the CLE, which is another limitation for this study. Therefore, it seems that the study of students' perspectives on the theoretical learning environment also identified more dimensions of the learning environment. In addition, to get a more complete picture of the CLE, it is recommended that in addition to reviewing the views of nursing students, the views of other clinical students, people working in the clinic, clinical educators should also be considered.

Conclusion

In general, based on the findings of this study, nursing students prefer to have a more positive CLE than what they actually experience. Students prefer an environment with a higher level of personalization, student involvement, satisfaction, task orientation, teaching innovation, and individualization. Trying to change the CLE to better align it with what the student prefers and expects may lead to better outcomes for students in the clinical setting. The study showed that more needs to be done to provide a healthy learning environment for nursing students, which is also the responsibility of nursing researchers, educators, and managers.

Conflicts of interest

There are no conflicts of interest.

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