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ORIGINAL ARTICLE

The status of Clinical education in ophthalmology surgery ward of Vali-e-Asr Hospital affiliated with Birjand University of Medical Science before and after intervention

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Abstract

Introduction: Clinical education is one of most important medical education courses in Medicine. Medical education is in turn part of the higher education system that deals with human life, and thereby it is important to pay attention to its quantitative and qualitative aspects. In this study, we aimed to investigate the status of clinical education in ophthalmology ward of Vali-e-Asr Hospital in Birjand before and after an intervention.

Methods: This Descriptive study was conducted on students and interns in the ophthalmology department of Vali-e-Asr Hospital during one year. The number of participants was 30 (on average, 4-6 people per month). A questionnaire was first designed in 5 fields (Reviewing educational activities, studying the educational environment, reviewing patients' records, assessing the duties of trainees, and assessing the duties of interns). The questionnaires were later evaluated by 5 faculty members for validity, and after confirmation, the ophthalmology surgery ward was assessed in 3 months. Interventions were performed by the head and the deputy of the faculty of medicine. Eight months later, assessment was again carried out by the same researcher. The results were encoded and entered into SPSS 15 software and analyzed at the level of $P \leq 0.05$ by independent t-test.

Results: After intervention in the field of educational activities, the score increased from 6 to 10 ($P = 0.13$). The educational environment score increased from 7 to 14 ($P = 0.002$). The mean score of assessments of interns before and after intervention was equal to 8. The mean scores for patients' records improved from 8.23 ± 1.98 to 8.92 ± 1.65 ($P = 0.04$).

Conclusions: The results of this study showed that physical changes in the educational spaces by the authorities can be easily accomplished and the educational environment can be improved by planning. It requires more action however to create changes in educational programs, improve the quality of clinical education, provide emergency training to students, and make plans by authorities.

Key Words: Education;Ophthalmology; Students, Medical; Evaluation Studies

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Introduction

Medical education is part of the higher education system that deals with human life and it is important to pay attention to its quantitative and qualitative aspects. Considering the important role of the medical group as an effective member in providing social services and emphasizing health education, the need for a regular scientific and professional system including university as a real substrate of human resource training is undeniable (1)

Clinical education provides an opportunity for the student to turn theoretical knowledge into the mental, psychological and moving skills necessary to care for the patient. (2) And given that learning happens in the real environment and with patients it has a fundamental difference with education in other disciplines.

Clinical teachers need to have the necessary knowledge, skills and characteristics and to know when and how to use them. In addition, knowing the strategies for teaching and learning in the teaching-learning field provides valuable opportunities for teachers and learners to consider various aspects of patient care (3).

In hospitals, different training programs are used such as morning report, grand rand, journal club, educational round, and mortality conference (4).

Clinical education can be seen as a set of learning facilitating activities in a clinical setting in which clinical instructors and students participate equally, with the goal of making measurable changes to students for clinical care. Hope is that at the end of the school year, students will be able to implement the various skills they have learned (5-6).

In the medical universities of the world, a student's ability to obtain clinical reasoning, awareness of disease prevention, the natural tendency to achieve individual development, and acquisition of professional ethics are mentioned as the most important goals from among 11 goals, and the curriculum of their medical education is designed accordingly (7).

In Harden's educational management model, emphasis has also been placed on the proper use of clinical teaching settings and methods, as well as on the correct organization of educational content to improve the level of knowledge, attitude and skills of medical students; moreover, the role of educational strategies in applying theories of learning is considered as highly important (8). Considering the above-mentioned issues and the importance of examining the status of clinical education, and considering that there has not been any intervention to improve the status of education in Birjand University of Medical Sciences, we decided to study the status of clinical education in the ophthalmology ward of Vali-e-Asr Hospital, to perform a necessary intervention, and then to evaluate again the results and changes in the status.

Methods

The interventional study was conducted within one year (2014-2015) in the ophthalmology ward of Vali-e-Asr Hospital in Birjand. The research population comprised of students enrolled in internship whose grade point average was 8 per month and whose educational field was the ophthalmology ward.

First, a questionnaire was prepared in five domains based on the Ministry of Health regulations and checklists. The questionnaire included a review of educational activities (morning report, grand round, educational round, educational clinic, classroom, journal club, steady conference, slit lamp training, direct and indirect ophthalmoscopy training, etc.), survey of educational space (presence of the training secretary, attendance booklet of trainee and interns, inside the ward classroom, computer, library closet, book in the closet, examination room, doctor's room, internet access, negatoscope), assessment of trainees' duties and interns' duties, wearing white dress, identification card installation, timely presence in the department, timely departure from the department, number of patients that each of the trainees and interns has, recording of leave in writing, determining a surrogate during the leave, etc.), and reviewing of the patient records (internship biography, trainer biography, daily internship report, summary of the records, Para clinical papers report, recording of stamp, signature and date and time by physicians and internists in the papers of reports).

The questionnaires were evaluated and confirmed by five experienced professors from the university. At first, the questionnaires were completed within three months by referring to the ward and direct observation. The data was then checked by the head of the faculty of medicine and the clinical department of the faculty of medicine and intervention was performed by a meeting with the professors of the ophthalmology department and explanations regarding the initial assessment of the ophthalmology ward and the necessity of changes in it were also delivered. Then, the defects of educational spaces were assessed and the

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necessary equipment was purchased by the medical college. The questionnaires were completed again 8 months after intervention. After collecting data, they were encoded and analyzed by SPSS-15 software using independent t-test at the significance level of $P \leq 0.05$.

Results

The positive changes that took place in these interventions were the conference of professors, the student conference, the training round, and the bringing out of external objects. The relative frequency of ophthalmology educational activities increased from 6 before intervention to 10 after intervention, which was not statistically significant (p = 0.13) (Table 1).

The relative frequency of education and research facilities in the ophthalmology ward was 7 that increased to 14 after intervention. This increase was statistically significant (P = 0.002) (Table 2).

The mean score of assessing the tasks of the interns of the ophthalmology ward before and after the intervention was equal to 8. Mean score of the evaluation of patients' records in the ophthalmology ward before intervention was increased significantly from 8.23± 1.98 to 8.92 ± 1.65 after intervention (P = 0.04)

Table 1: Ophthalmology educational activities before and after intervention

Educational activities	Before intervention		After intervention	
	Has	Does not have	Has	Does not have
Morning Report		√		√
Journal Club		√		√
Grand round		√		√
conference of professors		√	√	
Educational round		√	√	
Interesting case report	√		√	
Training Clinic	√		√	
Training classroom	√		√	
Students conference		√	√	
Prescription training		√		√
Training of working with direct ophthalmoscopy	√		√	
Training of working with indirect ophthalmoscopy	√		√	
Training of working with slit lamp	√		√	
Training of bringing out of external object		√	√	
total	6		10	

Table 2: Comparison of relative frequency of educational and research space facilities in the ophthalmology ward before and after intervention

Status	Educational and Research Space		P-value
	Has	Does not have	
	N (%)	N (%)	
before intervention	7 (50)	7 (50)	0.002
after intervention	14 (100)	0 (0)	

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Discussion

In our study, the educational activities in the ophthalmology ward included 14 items whose frequency before intervention was 6. These activities included educational clinics, classrooms, reporting interesting records, and direct and indirect ophthalmoscope teaching as well as working with slit lamp. This was increased to 10 after intervention and involved bringing out the external object, student conferences, training courses, and faculty conferences. Although the educational activity score increased from 6 to 10, the increase was not statistically significant.

In a study conducted by Ambari and Ramezani in 2008, the quality level of education in the hospital was 32.5% and 30%, which was reported weak by, respectively, interns and trainees.

Interns assessed the status of clinical skills training at a weak level with an average of 39.6%, but the trainees determined the situation with an average of 50% at a moderate level.

Trainees also mentioned the most important obstacles to learning: lack of repetition of skills, limited access to the teacher to solve problems or to answer their questions about patients and low quality of training courses, but the quality of the morning report was highlighted as one of the strengths (average 73%) and was evaluated as good (9).

In our study, the relative frequency of educational and research space facilities in the ophthalmology ward before intervention was 7, which included an educational secretary, whiteboard, overhead, library wardrobe, book in the wardrobe, examination room and doctor's room, and increased to 14 after intervention; that is, all items in the questionnaire were added to the section. This increase with P = 0.002 was statistically significant. The average score for assessing the tasks of trainees before and after the intervention was equal.

In a study by Peyman et al., it was concluded that 58% of students considered the status of the educational environment to be inappropriate. Also, 77.8% of students stated that there is not enough welfare facilities in the department and 55.5% of the students do not believe that educational aids in the clinical environment is sufficient (10). It should be noted that it is not possible to compare the average of assessment grade of trainees as there was no ophthalmology ward before the intervention of July 89.

In reviewing the ophthalmology ward records, 49.1% of the records had an internship biography that increased to 72.7% after intervention, but about the daily report of internship before intervention, only 5.7% of the records had a daily report which fell to zero after intervention. This difference suggests that in the ophthalmology ward not only they do not record the daily report but they do not also know the patients. There were a record summary in %100 of records before and after the intervention.

Registration of the date of the visit was documented in 100% of the records before and after the intervention, but the visit by the physician before the intervention was recorded only in 5.7% of the cases, which decreased to 1.5% after the intervention. The reason during the reviewing of the records was the lack of routine registration of the time that was determined by none of the ophthalmologists during the visit. Registration of the date and time of the visit by the intern was 54.7% before the intervention, which increased to 71.2% after intervention.

In a study conducted by Esmaeili and Abazari in Amir-Kola Babol Hospital in the academic year of 2006 and 2007, 730 records were checked. The statuses of recording of the biographies by midwives, interns and trainees were respectively moderate, moderate and poor (P = 0.000); the status of the disease record in all three weak groups (p = 0.000) and registration of the physical examination were respectively moderate, moderate and poor (p = 0.000); the status of the summary record of the case in two groups of assistants and interns was good (p = 0.009); and the overall quality of both groups of midwives and interns (p = 0.000) were evaluated moderate (11).

Also, in the study of Sobhani and Shojaei Tehrani, 68.1% of the records were of moderate quality according to the patient's biography and 31.9% of the records had a poor quality. No records were found in good quality (12). In an article presented by Saif Rabiei and Siddiqui in the year 88, after reviewing 457 hospital records from 4 educational hospitals, these results were obtained: the date, seal and signature of the physician was registered in 93 percent of the cases, and this figure was equal to the frequency of those recorded by the interns. Similarly, there was a biography in educational records. 88% of the records were sealed and signed by an intern or an assistant and only 61% of the cases in the disease sheet were signed and stamped by an assistant or intern. The results of the research showed that hospital records are seriously deficient in registering of data (13).

It seems that the reasons for nonconformity of the correct principles of file writing in educational hospitals is multiplicity, including large number of

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patients referred, lack of sense of responsibility by students and interns, and most importantly, lack of adequate training.

Conclusions

The results of this study showed that physical changes in educational spaces can be easily accomplished by authorities, and the educational environment can be improved by planning.

However, making changes in educational programs, improvement of the quality of clinical education, training of the emergencies to students, and management stability, in addition to planning by the authorities, require more actions.

Recommendations:

- Equipping educational departments with modern and intelligent learning assistant tools
- Continuous monitoring of the training quality
-Forcing professors and students to observe the training programs and to monitor over them carefully.

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Conflict of Interests

There is no any conflict of interests.

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