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Early Clinical Experience: A Way for Preparing Students for Clinical Setting

Sedigheh Ebrahimi¹, Javad Kojuri², Soheil Ashkani-Esfahani³✉

1. Associate Professor of Pediatrics, Medical Ethics Committee, Shiraz University of Medical Sciences, Shiraz, Iran

2. Associate Professor of Cardiology, Shiraz University of Medical Sciences, Shiraz, Iran

3. Student of Medicine, Student Research Committee, Shiraz University of Medical Sciences, Shiraz, Iran

Abstract

Background: Various methods are used to improve the quality and usefulness of basic sciences taught to medical students before beginning of the clinical course and practice in higher grades. One method which is evaluated in the present study is early clinical experience. **Methods and Materials:** In this descriptive study, all medical freshmen were participated in a half day workshop for familiarity with hospital clinical environment. The attitude of the students towards early clinical exposure, profession, and medical education was investigated using a 30-item questionnaire before and after this workshop. **Results:** Totally, 207 students participated in the present study. Overall, scoring of the program was good to excellent on a five-point Likert scale (93.75%). Most students (89.6%, score =4.25) believed that the program's content and management was appropriate for them. **Conclusions:** It was concluded that early clinical experience parallel with theoretical courses can provide a framework for the beneficial and successful integration of the teaching and learning of basic sciences for medical students. [GMJ. 2012;1(2):42-47]

Keywords: Early clinical experience; Teaching; Learning

Introduction

Early years of undergraduate education (especially the first two years) are critical for the academic success of medical students. Such success depends not only on the expanding knowledge learned during these years, but also on pre-conceived attitudes towards medicine and the role of the physician.⁽¹⁾

In the traditional curricula of medical education, students learn theoretical knowledge without contact with the patient in a clinical

context. Moreover, in clinical fields they cannot recall important basic scientific concepts; therefore, parts of their academic education become impractical.^(1,2) Also students tend to feel slightly anxious, which is often brought on by real clinical situations for which they are not psychologically prepared.⁽³⁾ Various approaches have been introduced to find new ways of didactic instructions in order to improve teaching basic sciences and make it more practical.^(1,3,4)

Many medical schools now implement a pro-

gram called early clinical exposure to introduce important issues in medicine to pre-clinical undergraduate medical students. Early exposure to real clinical setting may promote socialisation and strengthen students' affective and cognitive learning.^(1,4)

Early clinical exposure has been suggested to help medical freshmen overcome their tension and stresses and motivate them to develop a better insight and awareness to the medical profession.^(1,4) Implementing a short-term period of early clinical exposure program could influence medical students' attitude towards medical education and boost their confidence in their ability to succeed in medical practice and their social, emotional, and professional satisfactions and problems.

The current early patient contact programs in Shiraz Medical Schools are available for first year medical students. This program aims to introduce the fundamental educational philosophy to the first-year medical students and thereby enhance their motivation to become good physicians. There is currently a dearth of data available on the impact of these programs on Shiraz University Medical students; the present study, therefore, sought to investigate this aspect.

Methods and Materials

In this descriptive study, one semidiurnal workshop was added to the current curriculum. All medical freshmen (n=207), students of second year, were participated in the program during the first semester and at the beginning of the second semester of the educational year. The course was compulsory for all medical students, and more than 100 students per semester were enrolled.

This program consisted of multiple events that prepared students for a memorable and meaningful hospital experience. It was intended to provide students with the opportunity to experience the real clinical environment. Also the program contained half day courses, which were designed within each of the immunology, bacteriology, cardiovascular, endocrine, and physiology module to offer early interaction with patients and demonstrate the clinical

application of basic sciences.

The students were randomly divided into major groups of 25 to 30 students under the supervision of a clinical faculty member and then divided into smaller subgroups of 8 to 10. The heads of the subgroups were selected from the fourth and fifth year medical students with the responsibility to guide their teams in the clinical setting.

After a brief description of the objectives and responsibilities of a medical doctor towards the patient and society and problems or issues that arise in the clinical setting drawing upon the expertise of expert and experienced professors in this field and also the rules noted in the Hippocratic oaths, the groups of students were taken to teaching hospitals.

Cooperative patients with uncomplicated medical conditions were selected to be visited by medical students and to be interviewed for their history of disease and also basic physical examination with respect to the disease. At the end of the program, an evaluation was conducted to guide further development. At the beginning and end of the period, the attitude of all the students towards early clinical exposure, profession, and medical education was investigated using a 30-item questionnaire developed by the Educational Development Center (EDC).

The questionnaire had both open-ended questions, which yielded narrative comments, and structured questions, which yielded semi-quantitative data. Each item was scored on a five point Likert scale, with a score of 1 =poor, 2 =not adequate, 3 =satisfactory, 4 =good, and 5 = excellent to determine the overall rating of the program by the students. The common questionnaire contained 18 questions and there was an extra questionnaire containing 12 questions (total 30 questions) in the form of a five-point Likert scale. The validity of the questionnaire was assessed by 3 experts in medical education and its reliability was confirmed via the Test-Retest method.

The data were analyzed using SPSS-PC Base 15 for Windows. The quantitative data are reported in frequency distributions. In the qualitative data analysis, the themes were identified for each open-ended question.

Items in the student course survey inquired

whether the health care visits and patient contact were a positive experience and whether the visits gave them insight into their future role as a physician. The remaining data presented were collected indirectly, from an open-ended item in the course survey, in which students commented on their experiences.

Results

Overall, 207 students (years 2008-2011) participated in this program. Completed questionnaires were returned by 135 of the students. The response rate was 65%. The major evaluated outcome was the students' perceptions of the effectiveness of the program. The participants completed an anonymous evaluation form at the end of the program, assessing the effectiveness of each program's component (i.e., introductory lecture, hospital round, and large-group summary) and the overall program (Table 1).

The majority (93.75%) of the students in their positive feedback gave an overall rating of the program as good to excellent on the five point Likert scale (1=weak, 5= excellent). Most students (89.6%, score =4.25) believed that the program's content and management was appropriate for them (Table 1).

Table 1. Students' responses about the material and management of the program; data are expressed as percentage (%) of each response.

| Category of responses | Frequency% | | |
|---|------------|----------|-------|
| | Good | Moderate | weak |
| Found of a new insight towards the medical profession | 92.1% | 5.3% | 2.6% |
| Overall workshop evaluation | 93.75% | 5.4% | 0.85% |
| Large-group discussion | 78% | 14.1% | 0.9% |
| Program management | 89.6% | 10.4 % | 0 |
| Time management | 82.1% | 15.3% | 2.6% |
| Quality issues | 93.1% | 6.05% | 0.85% |

Students were also requested to write about what they got from the program, defects, and strengths of the program, and suggestions for further improvement. Some students responded to the open-ended questions and described the experiences that affected them; their comments were qualitatively analyzed and categories of the responses for each question were derived (Table 2). Totally, 94% of the students were enthusiastic about the program and valued the experience as satisfactory.

Table 2. Theme of students' comments about the program

| Theme of comment | Percentage of students (%) |
|--|----------------------------|
| Finding the program ineffective | 2 |
| Acutely aware of their new role and responsibility as medical students and aware of future careers | 7.5 |
| Acquiring more work conscience | 1 |
| Developing their sensitivity towards patients' problems and needs and desire to help people | 25 |
| Increased understanding of medicine and becoming more realistic about physicians' limitation in the profession | 5 |
| Finding learning basic sciences interesting and motivating | 19.5 |
| Familiarity with work environment | 4 |
| Perceiving that medical education is valuable | 25 |
| Identifying an emphasis on basic sciences along with clinical teaching | 11 |
| Increased interest in medical education and motivation about their future vocation and career | 9.5 |
| Provided important opportunities for students to enter unfamiliar territory Introduction to the hospital environment | 16 |

The survey showed that clinical contact and interaction with patients and watching the classical features in them was felt to be the best feature of the program and increased the students' interest in the learning of basic sciences and their application (87%).

Moreover, 29% of the respondents showed that their attitudes towards basic sciences and their role in medical practice had been changed and after this program their motivation to study basic sciences had increased. All the students suggested that semidiurnal ECE conferred them a better and deeper understanding of basic sciences. The students agreed that their experiences with patients were positive (94%). For the majority (92%), these visits gave a favourable insight towards medical education.

It seems that this program achieved an effective outcome and was likely to augment the students' interest, motivation, and self-awareness (21%). Some of the respondents (87.5%) felt that early patients' contact was essential for future groups of first year medical students, while the rest (12.5%) felt it was advisable.

The students' suggested that the program could potentially be used for the introduction of each topic of basic sciences because it motivated them to read more (36%). Furthermore, they reported that they had become more familiar with work environment (36%), learned how to behave towards patients (3%), learned in practice (15%), and received a new insight (5%). The respondents requested repetition of the program once a month (44%), twice a semester (36%), and for each system (10%). None of them perceived that the program was not needed. Also, 67% of the students expressed a desire and a need for ECE to be implemented in teaching basic sciences for each system. The factor mentioned by the students contributing to their requisition was familiarity with the clinical environment (44%), which rendered entering clerkship less stressful for them and increased motivation (42%). Additionally, 21% of the respondents reported that early patient contact might be useful in gaining motivation and giving direction in their studies particularly in relation to professional development. Forty-four percent of the

students believed that early experience was helpful to develop familiarity with the clinical environment. In regard to the question on a new attitude, 33% of the students believed that the program increased their positive feelings about the value of their vocation and saving patients' life and that it enabled them to see the patient as a person within family. Thirty-two percent expressed a new attitude towards medical ethics and professionalism. A large number of the students said that early clinical contact enhanced their sensitivity towards the patient's problems and needs.

Commenting on what aspect of the program contributed to the formation of a new vocational view, 78% of the students said that seeing patients helped them to be more sensitive to actual patients' difficulties and trouble caused by disease. Twenty-six percent of the participants reported that they had obtained a different insight into the new environment and doctor duty than they otherwise would have, whereas 88% reported that they had not obtained any particular insight into clinical teaching compared with before. Finally, 46% of the students reported that they had gained motivation to participate in clinical round voluntarily.

Discussion

Clinical experience is a key ingredient to reinforce the integrated base curriculum and increase the value of it. Clinical experience provides medical students with an experiential context for learning basic science content and opportunities to experience the relevance between basic science knowledge and its clinical application. This enables medical students to obtain a better and deeper understanding of medicinal theory and practice through the application of their knowledge in real hospital situations.⁽⁵⁾

Early clinical experience programs are an increasingly widespread element of undergraduate medical education. By having this integrated learning, which is supplemented by the undergraduate program, the learning outcome for students is greatly enhanced and through this experience students are given the oppor-

tunity to work collaboratively and to become effective communicators.⁽⁶⁾

A significant element in Shiraz University of Medical Sciences' program is the early clinical experience component undertaken in parallel with the students' basic science studies. In this study, first year medical students participated in the hospital environment in order to become familiar with health care professionals and also their own duties and future role as a physician. According to the results obtained, it seems that the program had a valuable and positive effect on the students' perspective on medical education. The students found the experiences valuable for their learning paralleling their awareness of patients' need.^(6,7)

As was reported by previous studies^(6,7) and based on the information supplied by the students, it seems that the application of early contact with patients can increase medical students' enthusiasm and motivation in their education and strengthen their positive attitude towards the medical profession. Moreover, such an experience can influence career choices.⁽⁸⁾ Early experience helped the students learn about professional roles and responsibilities, healthcare systems, and health needs of a population. This study showed that early clinical experience called for more at-

tention to the importance of basic sciences and increased the students' interest in studying basic sciences.

Chiming in with the findings of some previous surveys,⁽⁶⁾ the result of the present study demonstrated that early experience enhanced empathic attitudes towards ill people.⁽⁶⁾ The students agreed that early experience would fill gaps in a variety of areas by meeting patients in person, such as learning the tasks of doctoring. With regard to students' requisition for repeating these courses, it seems that this program gave the students' satisfaction and increased their interest and motivation. The students commented that early clinical experience had boosted their confidence, helped them develop an appropriate attitude towards their studies, and better prepared them for future practice.^(1,9,10)

Conclusion

Depending on the attitude of the student, it would appear that early clinical experience, in tandem with theoretical courses, can provide a framework for the beneficial and successful integration of the teaching and learning of basic sciences in a traditional program.

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