

# STUDENTS' PERCEPTIONS ON MEDICAL EDUCATION AT MARMARA UNIVERSITY SCHOOL OF MEDICINE

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## ABSTRACT

**Objective:** The aim of this descriptive study was to evaluate the students' perceptions relating to medical education at Marmara University School of Medicine in order to include their opinions and recommendations in future curricular and methodological changes in medical education.

**Methods:** Data was collected by a questionnaire. Eighty four recent graduates participated in the study; the response rate was 60.4%.

**Results:** The graduates were pleased to be asked their opinions. The majority agreed that there was need for a "moderate change" in the educational system of Marmara University School of Medicine. Graduates who reported "changes in the educational system are necessary" indicated that necessary changes should be done basically in areas such as educational methods, curriculum, audio-visual materials, training skills and assessment/evaluation methods.

**Conclusion:** This 'baseline evaluation' is considered as the initial step towards the

improvement process of medical education in Marmara University School of Medicine, since the necessary changes were highlighted by the results. These results demonstrated conformity between the opinions and expectations of students, and the needs, principles and suggestions stated by the *Institutional Undergraduate Education Investigation, Planning and Coordination Committee*. The initial research provided a hopeful perspective in openness to and compliance with the change process at Marmara University School of Medicine.

**Key Words:** Medical education, Students' perceptions, Changes in medical education

## INTRODUCTION

In response to current challenges in this century to reform medical education, a number of medical schools have replaced traditional educational methods with innovative curricula (1). Since the famous and influential Flexner report in 1910, at least 24 other major reports advocating reform have been issued, and they

are strikingly similar in their prescriptions (2,3). Innovations such as problem-based learning and community-oriented education took a principal place in new medical schools. The need to change medical education is however greater in established medical schools, but innovations seem more difficult to achieve there, although in some cases a certain measure of success has been reported (4).

Marmara University Medical School is a relatively young medical school; it is in the process of changing its curriculum as well as revising educational methods in the light of recent developments. Some other medical faculties in Turkey have also been doing, likewise (5).

As the first part of the improvement process, several strategies have been put forward since the end of 1997, such as:

1. participation of all parts, including students, in re-determination of the goals of education,
2. being guided by the local and global changes and improvements in medicine and medical education,
3. depending on careful examination of the current system and identification of the needs for a change; this point was considered as the first and a very important step towards the improvement process (2,3).
4. and rebuilding of the system step by step, starting with the core curriculum.

Several committees were formed in order to implement these strategies. This study has been regarded and conducted as an important instrument for students' involvement in the reform efforts.

Through this study, the students indicated that giving a high priority to their involvement in reform efforts was appropriate since they would be in a better position regarding the school in recognizing new topics; and their energy, commitment, and vision could be a very important impetus for change(6).

## **MATERIALS AND METHODS**

The 1998-99 graduates were selected as the study group. The study was held in the summer of 1999 by the *"Institutional Undergraduate*

*Education Investigation, Planning and Coordination Committee"*. A questionnaire was used for data collection.

When graduates applied to the registrar's office to receive their diplomas, they were first informed about the aims of the study and then given a questionnaire concerning basic sociodemographic information and levels of satisfaction relating to their medical education. Graduates were also asked to evaluate the quality of education of different divisions such as 'basic', 'medical' and 'surgical' sciences. Graduates completed the questionnaire under observation.

Eighty four of 139 graduates filled in the questionnaire, the response rate was 60.4%.

## **RESULTS**

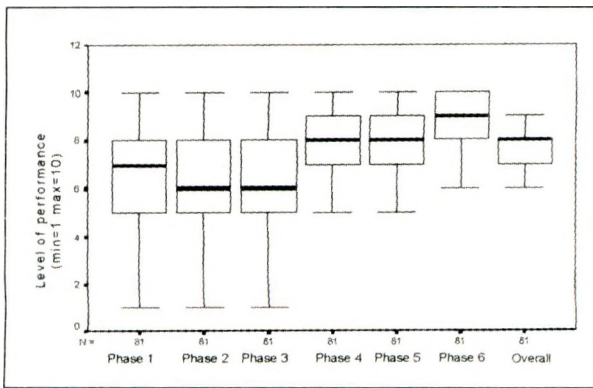
Fifty five percent of the graduates were female. There was only one married student.

Graduates were asked to assess their own performances during medical education using a 10 point scale (1-minimum; 10-maximum). They scored for each year in the school and for the entire medical education. The mean score for the entire educational period was 7.5 (Sd=1,5). The sixth year of the medical education got the highest score on the average (8.67 (Sd=1,5)) whilst the lowest scores were given for the first three years (6.71 (Sd=1,9), 6.48 (Sd=1,9) and 6.50 (Sd=1,8) respectively) (Fig. 1).

Almost half of the graduates (56.3%) reported that they had had "a happy time as student" in medical school, while 25.4% of them had been "unhappy". The rest of the graduates remained undecided.

When the reasons for 'unhappiness' were solicited by an open-ended question, some of the graduates reported reasons such as:

- "Medical education is very hard and stressful",
- "Anxiety for the future",
- "A very difficult examination is waiting for us after the graduation",
- "Problems of the current health system",
- "Medical education isolated me from social interests",



**Fig. 1.:** Self-Reported Performance Level of Students<sup>a</sup> for Each Year and for the Entire Medical Education (Box-plot)<sup>b</sup>

<sup>a</sup> Students were asked to score their own performance (level of success) during medical education using a 10 point scale (1-minimum; 10-maximum).

<sup>b</sup> Each box represents percentiles of the score distribution. Bold line in each box represents 50th percentile (median value).

- "Very limited social activities in the school"
- "Adaptation problems",
- "Too much memorization",
- "Personal problems".

Thirty eight graduates (45.2%) reported that there was some "essential medical knowledge" in the curriculum that they were not able to acquire during the medical education. First aid and emergency care was reported by 39.0% of these students as a topic, which was not taught sufficiently. Although students were asked about the 'lack of knowledge' in this question, they responded mostly on the 'lack of education to gain clinical skills'.

The 'deficiency in acquiring clinical skills' during medical education was examined by another question. Thirty five percent of the graduates reported that they were not competent in some clinical skills. Forty percent of the graduates reported they were not competent in basic surgical interventions such as intravenous injection, suturing and abscess drainage. Twenty percent of them were not competent in assisting child-birth and 17 % of them were not competent in skills related to emergency care (Table I).

Graduates were also asked for the reasons for the lack of knowledge as well as clinical skills.

**Table I.** Clinical Skills in Which Students Found Themselves Incompetent

Clinical Skills	n	%
Basic surgical interventions <sup>a</sup>	14	40,0
Assisted child-birth	7	20,0
Emergency care skills	6	17,0
Lumbar puncture	3	8,0
Thoracentesis, tracheostomy etc. invasive interventions	2	6,0
Other <sup>b</sup>	3	8,0
Total <sup>c</sup>	35	100,0

<sup>a</sup> IV injection, abscess drainage, suturing  
<sup>b</sup> 'I've worked hard by myself in order to be competent' 'treatment' 'paediatric examination'  
<sup>c</sup> 'some students have reported more than one skill'

This was a closed-ended question and included these choices:

- due to personal reasons
- due to educational methods
- due to the curriculum
- due to the physical environment
- due to the lack of necessary tools and materials
- due to the professors

Graduates were asked to mark these items according to the degree of importance. It was found that the majority of the students gave the first three ranks to the 'educational methods', to 'personal reasons' and to 'professors' as the main reasons of lack of knowledge and skills.

Out of 84, only five students reported that they were not competent in communication skills.

Since medical education is in English at Marmara University School of Medicine; graduates' opinions were also asked about this. Seventy five percent of the graduates reported that 'medical education in English' is very useful because it offers a big advantage for students in following the literature. The rest of the graduates were not very satisfied with the language of medical school and commented 'they were having difficulties in both understanding and communicating with patients' (Table II).

The data about the students' opinion related to the social activities at school is presented in



**Table II.** Students' Opinions on 'Medical Education in English'

Opinions	n	%
Positive effects <sup>a</sup>	63	75,0
Negative effects <sup>b</sup>	5	6,0
Neither positive nor negative	5	6,0
Must be in Turkish after preparatory year	2	2,4
Inconvenient in clinical practice	2	2,4
No idea	2	2,4
Must be in Turkish, optionally some lectures in English	1	1,2
Unnecessary	1	1,2
Only 'bedside' must be in English	1	1,2
No contribution to my college English	1	1,2
Medical education must be in our native language	1	1,2
Total	84	100,0
<sup>a</sup> Ease in following the literature		
<sup>b</sup> Difficulty in communication with patients		

Table III. Seventy percent of the graduates were dissatisfied with the social activities held at the school campus. The problems with both quality and quantity of the social activities at school were emphasized by many graduates as a reason for being 'unhappy' during medical education.

**Table III.** Students' Opinions About Social Activities

Social Activities	n	%
Completely insufficient	28	34,1
Insufficient	30	36,6
No idea	13	15,6
Sufficient	9	11,0
Other <sup>a</sup>	2	2,4
Total <sup>b</sup>	82	100,0
<sup>a</sup> 'Getting better within this year' 'I had a high school life instead of university'		
<sup>b</sup> 2 students did not respond		

The graduates evaluated the student-professor relationship specifically for 'out of the classroom contacts'; 42 % of the graduates remained undecided; 14 % of them found this 'unsatisfactory' whilst 35.4% of them found it 'satisfactory'. Graduates also stated that they had less opportunity to obtain contact with the professors teaching basic sciences.

Use of the library is one of the indicators of the quality of medical education. Students were

asked whether they used the library for reasons other than 'studying'. Sixty eight percent of them stated that they used the library mostly for reviewing the literature whilst 31.7% of them never used the library except for studying.

Graduates were asked if there was any need for making changes in the educational system of Marmara University School of Medicine. Only 10% of the graduates reported that there was no need for a change, whilst 89.2% expressed the need for radical or moderate change. However, it should be emphasized that the majority of the graduates (70.4%) agreed with the idea of the 'necessity of moderate changes' (Table IV).

**Table IV.** Need for Change in Education

Opinions	n	%
Yes, there is need for a radical change	16	19,8
Yes, there is need for a moderate change	57	70,4
I am not sure if it is needed	6	7,4
There is no need	2	2,5
Total	81	100,0

Graduates who reported 'changes in the educational system are necessary' were given nine choices about what might be done for such a change. The opinions of the students are shown in Table V. Most of the graduates agreed

**Table V.** What Might be Done for Change?

Necessary changes (n=73)*	n	%
'Educational methods which ensure active participation of the students should be used'	65	89,0
'Innovative methods should be introduced in teaching clinical skills'	65	89,0
'Audio-visual material which have been used for the lectures should be redesigned and reproduced'	52	71,2
'Training skills of the professors should be improved'	50	68,5
'Theoretical lectures should be reviewed and some of the topics should be added to the curriculum'	41	56,2
'Some of the topics should be considered as electives; not as a core subject'	41	56,2
'Theoretical lectures should be reviewed and some of the topics should be excluded from the curriculum'	35	47,9
'Oral examination system should be changed'	22	30,1
'Written examination system should be changed'	18	24,7
* This question was asked only to students who stated that 'change was necessary'. Students reported more than one opinion		

that 'educational methods which ensure active participation of the students should be used', 'innovative methods should be introduced in teaching clinical skills', 'audio-visual material which have been used for the lectures should be redesigned and reproduced, and 'training skills of the professors should be improved'.

Graduates were also asked to evaluate 'basic', 'medical' and 'surgical' sciences with respect to the sufficiency of their theoretical and/or practical education. Although not shown in this article, detailed data demonstrated that graduates have a shared judgement about competency of education of each department in different divisions. This may be an indicator about the reliability of the students' evaluation.

At the end of the questionnaire graduates were asked to compare their competency in both medical knowledge and clinical skills with the students/graduates of other medical schools in Turkey. This may be thought of as a premature question since the students were recent graduates and had not had any experience in practice. However, medical students have many opportunities to get into contact with medical students from other Universities. As a result, almost 90% of the graduates found themselves 'successful' or 'very successful' in knowledge, practical skills and attitudes toward patient/colleagues compared with other medical school graduates.

## DISCUSSION

This 'baseline evaluation' is considered as the initial step towards the improvement process of medical education at Marmara University School of Medicine, since the necessary changes were highlighted by the results. The majority of the 1999 graduates stated that there is need for moderate change. They have indicated that necessary changes should be done basically in areas such as *educational methods, curriculum, audio-visual materials, training skills and assessment/evaluation methods*.

These results demonstrated conformity between the critical and expectations of students and the needs, principles and suggestions stated by the *Institutional Undergraduate Education*

*Investigation, Planning and Coordination Committee*. Sub-committees studying the areas where improvements were expected have already been established.

Educational reform movements have been initiated in many medical schools in Turkey with different perspectives and experiences. Several studies have been conducted in order to evaluate current medical education also in those medical faculties. The results of these studies have shown many similarities with our study, yet some important differences exist.

According to the results of a study which was conducted in Ege University Medical School students were very dissatisfied with the social activities held at school, as were our students (7). In another study, 87.7% of the sixth year medical school students stated that they did not participate in social activities due to lack of leisure time (8).

The same study showed that 15.8% of students never used the library, whilst 65.4% used it only for studying (preparation for examinations). In our study, the rate of using the library for reasons other than studying was markedly higher.

Student-professor relationship for the 'out of classroom contacts' was evaluated by 94.2% of the students as 'unsatisfactory' in Uludag University Medical School(8), while 'unsatisfactory relationship' was reported by 14.6% of the students in our medical school.

In the same study at Uludag University, 79.2% of the students reported that they did not feel themselves competent in clinical skills and 81.3% of them in essential medical knowledge. Eighty seven percent of the students reported that it was very important and necessary to know at least one foreign language for a better medical education; and only 20% of them reported they were competent in one foreign language. Almost 100% of the students at Marmara University School of Medicine are competent in medical English.

The Association of American Medical Colleges gives information about the kinds of changes already occurring. In the preclinical curriculum, schools have introduced a wide range of new

courses and topics; and there is more attention on professionalism and values. Schools are making fundamental changes in the design and conduct of the curriculum, primarily by adopting more integrated (non-departmental) approaches to course design and management. Also, faculties are paying more attention to the role of residents as professors and role models(9).

It was stated that today's problems, however formidable they may be, are not as profound as those faced by medical educators a century ago --and that there is time and opportunity for visionaries and leaders to act. This may be true, but only if they can properly diagnose the present problems of medical education, amply understand their roots, identify effective means to remedy them, and galvanize medical educators to make the systemic, institutional changes, locally and nationally, that are called for(2).

A medical school should be active in various realms. Undergraduate training should be situated in the context of medical training as a whole, which does not stop with graduation(10).

Change in medical education is more likely to be maintained as a characteristic of education than stability. "We can look around" suggests Pritchett and Pound (1997) and see "many would be refugees from change, people looking for early relief from all the stress. Yet there is no place to run. No back door. No escape route from reality". Everyone, to a greater or lesser extent will be involved in educational change. Professors, trainers, curriculum designers, assessors, resource developers and students will not be able to escape from it. How should we respond? We should make "change" our partner not rival(3).

With its younger faculty, smaller number of students, progressive background, and openness to and compliance with the change

process observed during the initial steps of transition period, Marmara University School of Medicine promises a hopeful educational perspective for the future.

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