

## Comparison of the student's and faculty members' opinions about reform in GP education in Hamedan, Lorestan and Ahvaz Universities of Medical Sciences – 2003

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### ABSTRACT

**Purpose:** The objective of this study was to determine the viewpoints of faculty members and students of Lorestan, Hamedan, and Ahvaz universities of medical sciences about reform in GP educational program.

**Methods:** In this descriptive – analytic study 268 subjects including 170 interns and 98 faculty members teaching basic sciences and psychopathology courses were chosen randomly from the students and faculty members of Lorestan, Hamedan, and Ahvaz universities of medical sciences. The tool for collecting data was a two-part questionnaire which was validated by (?) method.

**Results:** The majority of students thought reform is necessary in basic sciences, physiopathology and apprenticeship sections and also the majority of faculty members believed that reform should be carried out in apprenticeship section.

Both students and faculty members believed that the basic disciplines of microbiology, anatomy, and physiology have a high application in clinical education periods and parasitology, general pathology, and immunology have a moderate level of application. The level of application of lessons embryology, biochemistry, biophysics, mycology, biostatistics, genetics, general health, epidemiology, and nutrition was assessed as low from the viewpoint of students and high from the viewpoint of faculty members. ( $P= 0.000$ ) Both faculty members and interns agreed that for the purpose of better education in apprenticeship period more emphasis should be put on common regional diseases and on practical skills, a few should be considered for apprentices, and reports should be written in patient's files.

The majority of interns and faculty members believed that a GP does not own enough competencies in the fields of communication, medical ethics, health and prevention knowledge, research skills and patient education.

There was no significant difference between the viewpoints of students and those of the faculty members in three universities studied.

**Conclusion:** The results of this study show that most of the students and faculty members believe that reform is necessary in medical education. Also absence of significant difference among the students and faculty members view points of three dissimilar universities indicates the problems present in medical education.

**Keywords:** FACULTY MEMBERS, STUDENTS, REFORM, MEDICAL EDUCATION CURRICULUM

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### Introduction

General Medicine is conventionally taught in Iran's universities through four sections of basic sciences, psychopathology, apprenticeship and internship.(1)

Numerous studies carried out in universities of medical sciences have shown that although great effort has been made to promote medical

education, there are problems in its different sections. For instance many medical students consider lessons of basic sciences as clinically inapplicable and therefore encounter with many educational problems in apprenticeship and internship sections that leads to their lacking scientific and practical skill. As it is obvious, there still remain problems in teaching educational necessities to medical students (2,3,4,5). The idea

of separation of medical education from health and treatment issues expressed in Iran in 2003 is an example of the matter. WHO too emphasises on need for change in medical education and considers the activities that are based upon society's needs as appropriate (6).

Regarding the above mentioned matters, the present study was carried out with the aim of understanding the viewpoints of medical education's customers that are students and professors. The study was done in three universities of medical sciences of Lorestan, Hamedan, and Ahvaz in the year 2003.

## Materials & Methods

In this descriptive analytic study 268 subjects including 170 interns and 98 faculty members teaching basic sciences and clinical courses from three universities of medical sciences were chosen randomly. These universities were chosen because of their dissimilarity.

Considering the direct involvement of professors of basic and clinical sciences in the process of education and assessment, their ideas prove useful.

Also it is important to know the opinions of interns who are nearly finishing their studies and have experienced and passed the last sections. The tool for collecting data was a two-part questionnaire. The first part included personal information and the second part had 21 multiple choice questions and some Likert scale ones on four sections of medical educations. The validity of questionnaire's contents was provided using the ideas of professors and general practitioners and it was provided with the method of repeated tests (?). A total of 268 questionnaires were returned and their results were analysed by statistical software SPSS V. 9.1.

## Findings

Most students believed that in three sections of basic sciences (72.2%), physiopathology (62%), and apprenticeship (62.9%) reform should be done, but most of the faculty members agreed with changing the apprenticeship period (58.6%). Statistical difference was significant about sections of physiopathology and basic sciences ( diagram 1) Most students and faculty members believed that no change is needed in internship period.

### The section of basic sciences:

Faculty members think that all the lessons of the section of basic sciences are highly applied in clinical settings. But the students think that lessons of microbiology, anatomy, and physiology have a high degree of clinical application whereas the lessons parasitology, general pathology, immunology, and histology have a moderate level of clinical application and the lessons embryology, biophysics, mycology, biostatistics, genetics and biochemistry are rarely applied clinically.

Also the lessons general health, epidemiology, and nutrition have a low degree of application. (chart one)

There was a significant statistical difference between the students' and faculty members' ideas about clinical applicability of the lessons of basic sciences section. ( $P = 0.000$ ).

While 50% of the students thought of passing comprehensive exam of basic sciences as an inappropriate requisite for entering the physiopathology section, only 14% of faculty members believed so.

### Physiopathology section:

The majority of faculty members and about half of the student thought this section is effective in training GPs but believed that more time should be devoted to teaching some parts of these lessons in clinical sections is a way to make these lessons more efficient.

### Apprenticeship section:

Both the students and the faculty members believe in the necessity of change in apprenticeship period and the majority of them said that in this section only theoretical matters are emphasized and developing competencies such as practical skills, problem solving skill, communication skills and medical ethics is neglected.

### Internship section:

The majority of students and faculty members believed that after finishing the internship period the students have scientific knowledge about important and common diseases but have obtained a moderate level of practical skills. Also the majority of them believed that at the end of this period, students do not have sufficient adeptness in choosing appropriate treatment (93.8%), observing medical ethics (56.7%), health and prevention information (73.6%), researching skills (69.7%), and patient education (93.8%) . key two statistical

test showed no significant difference between the ideas of students and faculty members of three universities studied.

## Discussion & Conclusion

As the results show, most of the students and faculty members believe in the necessity of change in general medical education. Also absence of significant difference between the opinions in three dissimilar universities indicates general problem in general medical education curriculum.

### Basic Sciences:

Many of the lessons of basic sciences have little application for a physician in student's opinion. Other studies too show an undesirable attitude of the students and their reluctance to these lessons. The studies done by Emami et al in Esfahan University of Medical sciences (1377) and the one carried out by Mirzabeigi et al in Shahid Beheshti university of medical sciences also indicate unfavorable opinion of the majority of interns and other students about the application of some of the lessons of basic sciences. (1 and 2)

Another study shows that from the viewpoint of General practitioners the most application of lessons of basic sciences section is related to lessons physiology, anatomy, and pathology and the least application is related to lessons medical physics, biochemistry, and genetics. (7)

It seems that lack of justification of lessons of basic sciences for the students and presenting basic sciences only theoretically without showing their practical applicabilities and clinical tutors' not using theoretical bases of lessons, in other words inadequate relation between basic sciences and clinical sections has resulted in such an attitude among medical students. (1)

Faculty members studied believe that changing the way of teaching these objects.

Surveys have proved that performing common rounds in which professors of basic sciences and clinical tutors both take part can lead to not only connecting basic sciences to clinic but also a deeper understanding of subjects and increased interest in students. (8)

Another notable point is that lessons which are applied in the field of health like general health, epidemiology, and nutrition, have little clinical application from student's point of view. This implies that medical education puts emphasis on

clinic and working in hospital rather than the society which specifies the necessity of making medical education.

### Physiopathology:

Most students and faculty members believe in devoting more time to teaching lessons of this section. They also think that teaching some parts of these lessons in clinical sections can increase their applicability. It seems that this is because of simultaneous theoretical education and encountering real applicability of theory.

At present lessons of this section are presented in the form of lecture. Using various methods of teaching like teaching on the basis of problem solving, small group discussions, and other methods can highly promote the quality of education in this section.

### Apprentice ship section:

Both students and faculty members believed in reform in this section and thought the major weakpoint of this section is emphasizing theoretical issues and not developing practical skills. Studies carried out in the country also confirm this matter.

The study done by Ghalipour et al in Gorgan University of medical sciences also showed that most apprentices do not own required practical skills such as injections, sutura, etc. (4). Students and faculty members think that increasing authorities and duties of apprentices, putting more emphasis on practical skills and regionally common diseases, considering a limited number of for apprentices and obliging them to do clinical examination and take history and write the report in patients file can prove useful in better making use of this section.

Using skill lab for practical education of students before entering clinical setting also will have a good effect on promoting this sections quality. Studies carried out in the country imply the fact that teaching practical skills in skill labs of universities has increased students' psychological preparation for performing different procedures and improved their clinical performance and competence. (9,10,11,12)

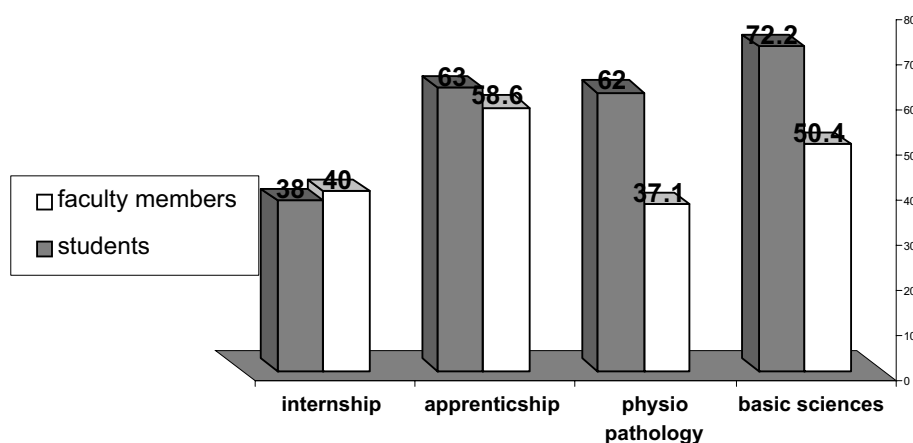
### Internship:

In student's and faculty members opinion, at the end of this section some practical and clinical skills are not well developed in the students. Other studies confirm this matter too. (3,4,10).

**TABLE 1.** Distribution of relative frequency of student's ideas about clinical Applicability of basic sciences' lessons

Applicability/lesson	Completely	To some extent	Low	Total
Microbiology	48.9	28.9	22.2	100
Parasitology	27.5	38.3	34.1	100
Histology	15.6	45.5	38.9	100
Embryology	9.7	32.1	58.2	100
Anatomy	67.3	27.4	32.7	100
Physiology	70.3	25.5	4.2	100
Biochemistry	11.6	32.9	55.5	100
Genetics	14.2	30.9	54.9	100
Nutrition	15.9	29.9	54.3	100
Epidemiology	18.9	25.6	55.5	100
Health	18	27.3	54.7	100
Biostatistics	10.3	17.9	71.8	100
General pathology	33.1	42.8	24.1	100
Immunology	23.8	47.6	28.7	100
Mycology	17.6	29.7	52.7	100
Bio physics	9.1	22.6	68.3	100

**FIGURE 1.** Distribution of relative frequency of student's and faculty member's ideas about reform in four sections of general medical education



Also some of the other qualities required for a GP liked observing medical theics, health and prevention knowledge, the ability to doresearch and train patients are not obtained in an acceptable level. The results of this problem include using conventional methods in clinical education and not emphasizing abovementioned matters in students education. Using modern methods in clinical education can make this important section very effective in general medical education. Also absence of a comprehensive assessment after finishing internship period and at the time of

student's graduation, has lead to neglecting student's weakness in practical skills. It is suggested that as it is required to pass the pre-internship exam in order to enter internship section, after finishing this section. A comprehensive theoretical and practical exam be the requisite for graduation of general practitioners.

Regarding that problems of general medical education exist in different universities of medical science in our country, it is necessary to pay attention to reforms in this field.

In our country medical education is offered with teacher centered method and learning is mostly opportunistic and with little contact with the society. The main education is in hospital and there are only little options for the students.

World Health organization emphasizes on the necessity of change in medical education align with activities based upon society's needs, and cooperation among different disciplines. Therefore changes should be made for reaching these goals:

- Preparing GPs on the basis of society's needs and expectations
- Keeping up with new scientific and technological discoveries in the field of medicine.
- Expanding physicians competencies for life long learning.
- Teaching skills of information technology.
- Adapting medical education with changes in conditions of health care offering systems.(6)

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