

## A comparison between students' attitudes and their performance regarding the factors influencing learning and exam results

Ebrahimi A, MD<sup>1</sup>; Ghodsi R, MSc<sup>2</sup>; Jamali K, MD<sup>3</sup>; Meshkibaf MH, PhD<sup>4</sup>;  
Beigizade S, MSc<sup>5</sup>

<sup>1</sup>Assistant professor, Pathology Department, Shaheed Beheshti University of Medical Sciences and Health Services

<sup>2</sup>Faculty member, Physiology Department, Fasa University of Medical Sciences and Health Services

<sup>3</sup>Assistant professor, Cardiology Department Fasa University of Medical Sciences and Health Services

<sup>4</sup>Associate professor, Biochemistry Department, Fasa University of Medical Sciences and Health Services

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### Abstract

**Background.** Various educational approaches to learning have been proposed. It is, of course, of vital importance to study those that have resulted in effective educational achievements.

**Purpose.** To assess the student's attitudes and performance in order to evaluate educational approaches and identify the variables leading to students gaining good marks.

**Methods.** The subjects of the study were medical students at pathophysiology phase. A multiple-choice questionnaire was prepared, the reliability and validity of which were confirmed. A paired-sample T-test was used to compare and analyze the student's Basic Sciences Comprehensive Exam scores in each discipline and their average score during the basic sciences course.

**Results.** With respect to attitudes, the students highly valued the importance of teacher's methodology and mutual respect, as an influential factor in learning. Furthermore, the majority of the students relied heavily on their textbooks as the main source of information and preferred to study at home, rather than any other places. Most of the students prefer to study in the morning. They believed that mid-term exams, quizzes, and active class participation do not have much effect on learning. However, it was of high importance to them to attend practical classes (labs). With respect to performance, most of the students used lecture notes as the main references, and considered their home as a good place to study and preferred to study in the morning, but have participated in theoretical and practical classes regularly.

**Conclusion.** Most successful students attributed their success to active class participation, taking mid-term exams, quizzes, and using library. Having analyzed the data, we recommend the authorities to provide more methodology workshops for teachers, sufficient number of textbooks, expanding or increasing the number of the reading rooms with essential equipment.

**KEYWORDS:** STUDENTS' ATTITUDES, STUDENT PERFORMANCE, LEARNING

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### Introduction

There are several factors which may influence learning abilities of the students (1).

**Corresponding author:** Ebrahimi A, MD Medical Education Development Center, Fasa University of Medical Science, Fasa, Iran.  
Fax: 0098731227091  
Tel: 0098731-2227093  
Email: ebrahimia @ fums.ac.ir

Various educational approaches have been proposed and practiced, and it is important to study those factors that have resulted in effective educational achievements (1, 2). Considering that medical subjects deal with the public health, these factors become more sensitive (2). It is believed that the medical students should know how to make use of the modern equipments in medical education and should be trained in such a way that they could apply their skills in their

health care provision, as a first contact point (3).

The present study was based on the students' attitudes and performance to evaluate the educational approaches and identify the variables leading to a good quality of learning.

### Materials & Methods

Forty medical students who were studying at the physiopathology level were included in this study. A professional questionnaire was developed, the reliability and validity of which were evaluated. The questionnaire consisted of several questions about the students' opinion and performance in learning.

Statistical analysis was done using SPSS software, by which a paired sample T-test was carried out, comparing the students' attitudes and performance with the results of the Basic Sciences Comprehensive Exam.

### Results

According to the results (Table), the students' performance was as follows: 68.4% used teachers notes, 73.7% of the students prefer to study at home, 57.9% would like to study in the morning, 47% were present in the theoretical classes and 99% in practical classes. Of all students, 47.4% used text books as references; 47.6% selected home as the best place for study,

**Table.** Various factors considered in the evaluation of students' attitudes and performance (N=40)

		%	%	%
		Opinion	Performance	Difference
Reference	CD	21.1	5.3	31.5
	Book	47.4	15.8	31.9
	Teacher's lecture note	21.2	68.4	47.2
	Student's (class) note	10.4	10.5	0.1
Place of study	Private class	10.2	0	10.2
	Library	21.1	5.6	15.5
	Dormitory	5.3	15.4	10.1
	Home	47.6	73.7	26.1
	General class	15.8	5.3	10.5
Time of study	Early morning	16.1	10.8	5.3
	Before noon	52.6	57.9	5.3
	Afternoon	15.5	19.5	4
	Evening	5.3	1.3	4
	Night	10.5	10.5	0
Question Bank Use	Very effective	11	5.3	21
	Effective	26.4	10.5	15.9
	Moderate effect	36.8	21.1	15.7
	No effect	10.5	63.1	52.6
Presence in the theoretical class	Very effective	5.3	26.3	21
	Effective	31.6	47.4	15.8
	Moderate effect	42	10.5	26.1
	No effect	21.1	15.8	5.3
Presence in the laboratory	Very effective	21.1	99% present in the practical class	
	Effective	57.8		
	Moderate effect	15.8		
	No effect	5.3		

and 52.6% preferred to study during morning hours.

### Discussion

The World Federation for Medical Education (WFME) suggests that the involvement of students, using their opinion and their contribution in the medical education programs is one of the successful methods for the improvement of education (4).

In this study we tried to evaluate the students' attitude and performance to recognize the differences, find the reasons and provide some solutions. According to the study results, most of the students were not satisfied with the number of quizzes, exams, etc, because it was stressful and troublesome. The students wished to be evaluated based on their active involvement and by other ways of evaluation such as group teaching and seminars, and to limit the number of exams.

Considering the students' interest for practical classes and laboratory, the education authorities should improve the laboratory equipments, provide sufficient number of staff and appropriate space, and develop an educational program to increase the students' clinical practice on the bedside in hospital wards during the physiopathology course. In spite of their positive attitude toward reading the textbooks, they preferred to study their lecture notes for the exams. We believe that lecture notes should have a higher standard, covering more aspects of the subjects.

Although the students have a positive attitude toward the importance of teaching methods and their influence on learning, their presence in the theoretical classes was not satisfying. They participated in the classes just to obey the rules and regulations, not to fulfill their own interests. Therefore, we recommend workshop to be held on teaching methods for faculty members, and to use some more attractive methods in the theoretical classes.

Studying needs a comfortable and quiet place for better concentration (5). Although some students live in the dormitory, most of them

prefer to study at home and at the early hours of the morning; this is the time when the libraries are closed. It is recommended to provide a convenient and standard reading hall in all dormitories without much of posters and other disturbing materials (6) that contains sufficient number of textbooks and references.

Overall, successful and high-ranking students have positive attitudes towards using question banks, multiple examination programs, presence in theoretical and practical classes, and using library and IT centers for study. They believed that these are the effective factors that make learning easier.

### Conclusion

Since we believe that our educational system must be designed in a way that all the students, or at least the majority of students, could be satisfied with their learning experience and requirements, we should meet their needs and provide them with every opportunity they require to achieve satisfactory results.

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