Brief Communication

Factors Affecting the First Rank in Epidemiology Course Earned by the Students of Kurdistan University of Medical Sciences in Pre-internship Exam: Students' and Teachers' Perspectives

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Abstract

In this qualitative study, the factors affecting the first rank in epidemiology course earned by medical students of Kurdistan University of Medical Sciences in pre-internship exams of March, 2009 and September, 2010 was investigated. A total of 43 students who had participated in the given exams were selected through census sampling technique. Two epidemiology teachers were also selected using a purposive sampling technique. Students' data were gathered through a questionnaire. .Teachers' data were collected using a semi-structured interview method. From the 43 administered questionnaires, 30 questionnaires were returned. The themes associated with the students were the teachers' expertise, appropriate syllabus, proper teaching methods and students' motivation and the themes related to the teachers were expertise and a defined curriculum. The findings of this study showed that appropriate curriculum and teachers' expertise were the factors that exerted a great impact on obtaining a first rank by students in pre-internship exam.

Key words: Medical education, Epidemiology, Pre-internship exam, Medical students

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Introduction

Pre-internship exam is given at the end of the clerkship program. The tested courses are ranked nationally according to the average of the obtained scores. The national academic success of the students can be indicative of the teaching quality of educational institutions. Regular evaluations are vital to identify and eliminate educational problems (1). The results of national pre-internship exam can be an appropriate criterion for assessment of educational departments in order to eliminate the probable deficiencies (2). The study carried out by Roudbari et al. showed that age, quota, marital status, length of the program and the mean of clinical scores were the most important variables affecting the results of comprehensive pre-internship exams (3).

There has been no study conducted on the factors influencing a first rank obtained by students in some university courses in successive periods, so far. Thus, the

present study was carried out to qualitatively analyze the factors influencing the high rank in epidemiology course earned by the students of Kurdistan University of Medical Sciences (KUMS) in pre-internship exam from the viewpoint of students and teachers.

Methods

All students (n=43) taking part in pre-internship exams in March, 2009 and September, 2010 as well as 2 epidemiology teachers, due to their "long teaching experience" and "designing epidemiology exams", participated in this study.

A questionnaire with 4 open-ended questions was used to collect the data from students (Table 1). From the 43 distributed questionnaires 30 were returned. Semi-structured interviews were performed to collect teachers' data. Informed consent, confidentiality, and the right to claim the data were the main ethical considerations.

Table 1. Students' questionnaire

1. What are the factors affecting the score of epidemiology course in pre-internship exam?
2. What challenges do you have in the learning of epidemiology course?
3. What are the weaknesses and strengths of the teachers of epidemiology course?
4. What are the negative and positive points of the syllabus and methodology of epidemiology course and the factors influencing motivation?

The students' demographic information was analyzed by SPSS using descriptive statistics. Content analysis was applied to analyze the results of the questionnaires and interviews. The responses to questions were reviewed several times, important subjects (word, sentence or paragraph) were underlined and primary codes (sentences or main concepts) were extracted. The relevant primary codes comprising the potential subjects were classified in terms of repetition, similarity and difference, and meaning into categories whose names indicated their content and represented the purpose of participants. Similar categories were merged into each other. Further, the researchers and participants agreed on the meaning of the data and contents of the categories. Moreover, each part was separately modified and defined. Eventually, 4 themes were obtained from the students' views (see results).

To analyze the teachers' interviews the content of each interview was transcribed and read several times to get a general understanding of the teachers' statements in line with the objectives of the study. Following the primary codes extracted from the study and based on similarities, the codes were classified and merged. An attempt was made to obtain maximum homogeneity within categories and maximum heterogeneity between categories. It was also ensured not to place any data within two categories. Finally, two main themes were extracted.

Results

From the 30 student participants, 12 students were male and 18 were female with the age range of 24-27. They all had passed the comprehensive pre-internship exam and were doing their internship program during the study period. The two teachers (male) were assistant professor and associate professor with the age range of 40-55 and 14 and 22 years of teaching experience, respectively.

The analysis of students' data revealed the following major themes:
1) Teachers' expertise: the majority of the students believed that expertise and the number of teachers, being knowledgeable in the subject and teachers' capability were the major factors in better teaching and consequently students' higher achievement.

2) Appropriate syllabus: The subcategories of this theme included proper and purposeful syllabus; definite, comprehensible and accessible references; organized classes and teachers' lesson plan.

3) Appropriate teaching methods: The subcategories of this theme consisted of students' mutual relationship, using diverse and active teaching techniques such as group discussion, involving students in discussions and permission to express ideas in class, which provide a suitable ground for better comprehension.

4) Students' motivations: the subcategories of this theme comprised of importance of the course and its applicability. The students need to understand the epidemiologic concepts to better comprehend the health issues and distribution pattern of the diseases. Thus, they pay more heed to this course and make more attempts to better understand it.

The findings related to teachers:
The analysis of the teachers' interviews indicated two major themes as follows:
1) The teachers' expertise: The subcategories of this theme included passing the specialized course of epidemiology and academic research and practical activities in different domains of epidemiology that assist teachers to gain a higher mastery over their teaching.

2) Defined syllabus: the subcategories related to this theme consisted of clear, applicable and purposeful syllabus in general medicine curriculum, epidemiology syllabus and references. The teachers believed that, as an

infrastructure, an appropriate planning consistent with the students' circumstances is essential for academic achievement. This, they argued, would define the agenda of the students and teachers and would reduce confusion and aimless activities.

Discussion

A significant point in the opinion of the students and teachers was teachers' expertise and mastery over epidemiology course. Numerous studies have reported teacher's academic abilities and being knowledgeable as the most important characteristics of a competent teacher, which are in line with the findings of the present study (4). In the study conducted by Mobaraki et al., 98% of students reported being knowledgeable as the most important feature of a capable teacher (5). Also, in the study of Moezi et al., students reported teacher's mastery over the content, demonstration ability, conveying the materials and ability to solve problems as the most important priorities (1).

An organized and purposeful syllabus is a factor making students interested in epidemiology course. Students consider avoiding confusion and waste of time as the reasons for their satisfaction and believe that this type of planning meets their expectations and contributes to their achievements. In another study in Pennsylvania Medical Faculty, 90% of students were satisfied with curriculum and most of them tended to work in research-related careers in academic centers at the end of medical education (6). Findings of this study were in line with the results of studies that regarded lack of appropriate educational program as an obstacle to students' academic achievement.

Appropriate teaching methods and classroom management techniques were the most significant elements for students to succeed in epidemiology course. Previous studies have indicated that cooperation of the teacher and students provides the ground for development and burgeoning of fertile and creative ideas, and teaching skills have the highest priority in the relationship between teacher and students (7).

Firouznia et al. reported application of proper teaching methods and classroom management techniques along with creating motivation and making appropriate relationship with students and proper social behavior as the factors contributing to the teachers' success (8). Students consider proper application of teaching methods and appropriate techniques as the necessities of the teachers' accomplishment (9). Effective teaching results in better educational achievements (10). In the study of Javadi et al., over 90% of students reported teaching skills, teacher's knowledge, respecting the student and encouragement to ask questions as influential factors in their learning (11). These findings are in line with the results of the present study in that motivating students resulted in positive outcomes.

Research shows that students with high motivation are more successful than those who have low motivation (12). According to Firouznia et al., motivation and interest in doing assignments were the most significant factors, and there existed a correlation between motivation and academic progress (8), which is in agreement with the results of the present research.

Conclusion

An appropriate curriculum, teachers' expertise and teaching capability were the factors influencing the high score obtained in pre-internship exam by students from the view of the students and teachers at KUMS.

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