Preferences of Teachers and Students for the Type of Exam Questions in Kirkuk Medical College

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Abstract:

Background: Types of questions means a lot for every school in the world starting from primary schools till the end of one's professional life. Medical college is among one of the top colleges due the level of the students accepted in the college to be future young physicians and their teachers work mostly as both doctors and teachers at the same time.

Objective: This study was performed to assess the preferred types of assessment questions among medical students and teachers in Kirkuk medical college to pinpoint what is ideal for both and to compare it with the results of studies conducted by other colleges published in the literature.

Subjects and Methods: Subjects included in this cross-sectional study ware 37 teachers (in basic and clinical teachings), and 181 students starting from the 3rd, up to the 6th year in Kirkuk medical college during 2011-2012 by proposing questions to both students and teachers and asking them to spot their preferences and other wanted data on the prepared questionnaire sheets by researchers.

Results: Among 181 students consisting of 120(66.3%) female students and 61(33.7%) male students, Single choice questions (best of five) are the first choice for 56 students due to easy memorisation. Among 26 teachers whose data is included, single choice questions (best of five) is the first choice for 11 teachers. Covering wider subjects is the most common cause behind the teacher's preference for a particular question type.

Conclusion: Single choice questions and essays are the most preferred question by the students. Teachers mostly preferred single and multiple choice questions for reasons of covering wider subjects, testing students concentration, and the presence of less factor of chance. Oral exams are preferred by many teachers.

Key words: Students, Teachers, Questions, Kirkuk.

Introduction:

Medical colleges provide an important service to society by creating practitioners responsible for healthcare. Thus it is important to ensure that medical education is of acceptable and consistent quality and produces practitioners who can meet society's needs.

The spectrum of educational strategies ranges from a lecture - based/ teacher centred to problem-based approach of teaching and learning [1].

Assessment is a vital part of medical curricula. The selection of suitable assessment or evaluation depends on its validity, reliability and practicability [2]. Examinations have several functions, e.g. to make sure that the students have learnt the essential part of a course, and to give feedback to the students and the teachers on the effectiveness of learning and teaching methods [3]. The aim of the students is how to pass the exams successfully and their target is how to

become good doctors by the time they graduate in order to serve the community. Till 1970, most schools in the world were applying description questions depending on memorization. The multiple choice questions (MCQs) and other types of objective questions need more than only reading, such as speed and ability to retrieval of knowledge as being so valid and necessary.

The written methods of assessment include multiple choice questions (MCQs), true-false questions, short answer questions, single choice questions, matching, completing sentences and essay questions. The oral methods of assessment include oral examination, long and short cases [1]. Several medical schools have used the objective structured clinical examination (OSCE) for long enough so that they become a well-known convention. It appears that it will be adapted in an enthusiastic way [4].

In Iraq, by the year 2010, there are 23 medical schools which governmentally funded with no tuition fee for Iraqi students. The medical degree (M.B.Ch.B.) is awarded by each medical college which qualifies the graduate as a competent physician with the ability to practice medicine as a general practitioner anywhere in Iraq [1].

The aim of this study was to assess the preferred types of assessment questions among medical students and teachers in Kirkuk medical college to pinpoint what will be ideal for both and to compare it with the result of studies conducted by other researchers in other colleges.

Subjects and Methods:

This cross-sectional study enrolled (37) teachers in both basic &clinical stages of Kirkuk medical college during 2011-2012. A special questionnaire is designed by the researchers consisting of the following items; their branches and preferred questions, MCQ, single choice (best of five), matching, and complete sentences (blanks), moreover its required causes behind their preferences whether each covers wider subjects, tests more depth of subjects, able to test from the subjects to show the concentration, provides less factor of chance, or being easier and need less time for scoring. The last part of questionnaire contains preference of the oral part of the examination and the causes behind their preferences and the subjects, language, confidence, reasoning and logic ability and finally delineating attitude and style. If they not prefer oral, uncovering the cause behind that as being an old fashion, presence of bias, variability in level of questions, personal effect and being more time consuming(all addressed).

The same cross sectional study designed to include (181) students in the 3rd, 4th, 5th and 6th classes in Kirkuk medical college during 2011-2012. Their questionnaire include: class, gender and preferred questions type among essay, MCQ, single choice (best of five) matching, complete sentences (blanks) and choices behind their preference if this includes possessing more chance of successes, easy memorisation of subject, less time needed for answering questions, presence of guessing or finally needing less time for revision.

Sheets of (11) teachers were dropped because of non-conclusive data. The data were collected by two separate forms prepared by the researchers for the students and teachers. The statistical part of the work is performed, Chi square method applied to calculate P value when appropriate. Required

consent has already been taken from the Dean.

Results:

Students Part:
There are 61(33.3%) male students and 120(66.3%) female students. The distribution of students according to class and sex is shown in (table1). The students responses about their preferences of the question types are as the following: Essay questions are the first choice for 55(30.4%) students, single choice questions (best of five)for 54(29.8%) students, matching questions for 40(22.1) students, MCQs for 30(16.6) students while blanks(complete sentence) questions were the first choice for only 2(1.1%) students. The distribution of students according to type of preferred questions and their level of choice (from1st to 5th level) are shown in (table 2).

Easy memorization of subject is the most frequent reason for choosing the essay preference 133(35.3%) followed by 'more chance of success for MCQ 107(28.4%), 'less time needed for answering questions' for single choice 74(19.6%), 'less time for revision of subject required' for matching 39(10.3%) while with the 'presence of guessing' is selected only by 24(6.4%). The distribution of students according to sex and the cause(s) behind their preference of a particular question type is shown in (table3).

Teachers Part:
This study enrolled (37) teachers in Kirkuk medical college. Sheets of (11) teachers were excluded because of non-conclusive data. the teachers responses about their preference for question types are as the following, single choice questions (best of five) are the first choice for 11 teachers, MCQs for 10 teachers, essay questions for 3 teachers, blanks (complete sentence) questions for 2 teachers, while matching questions are the first choice for only 1 teacher. The distribution of the study sample by type(s) of questions preferable by teachers and their levels of choice are shown in (table4).

Covering wider subject 31(31.3%) is the most frequent cause behind the teachers' preferences for a particular question type followed by 'test concentration more' 28(28.3%), 'less factor of chance present' 15(15.2%), 'test depth of subject more' 14(14.2%) and lastly being 'easier and needs less time for correction' 11(11.0%). The distribution of the study sample by causes of their preference is shown in (table5).

Most teachers 15(79%) prefer oral examinations while 4(21%) do not. The distribution of the study samples by their preferences for the oral part of examination is shown in (table6). Testing students' confidence is the most common cause for oral exams preference 25(22.3%) followed by testing reasoning and logical abilities 23(20.5%), testing attitude and style 22(19.6%), testing language 21(18.8%) and testing conversation 21(18.8%).

Teachers who do not prefer oral exam reported the presence of bias as the most common cause 6(37.5%) then variability in level of questions 4(25%), being old fashion 2(12.5%), personal effects 2(12.5%) and being time consuming 2(12.5%). The distribution of the study sample by their positive (Yes) and negative (No) responses to oral examination is shown in (table7) and (table8), respectively.

Table (1): Frequency distribution of the students by class and sex.

Class	Sex				Total	
	Male		Female			
	No.*	%	No.*	%	No.*	%
3rd	12	32.4	25	67.6	37	100
4th	12	24	38	76.0	50	100
5th	15	36.6	26	63.4	41	100
6th	22	41.5	31	58.5	53	100
Total	61	33.7	120	66.3	181	100

X^2=3.16   d.f. = 3   P value > 0.05   *No: number

Table (2): Frequency distribution of the students by type of preferred questions and their level of choice.

Type of preferred questions	Level of choice									
	1st	%	2nd	%	3rd *	%	4th *	%	5th *	%
Essay	55	30.4	33	18.2	30	19.5	22	22.9	7	7.1
Single choice	54	29.8	50	27.6	31	20.1	8	8.3	4	4.0
Matching	40	22.1	48	26.5	50	32.5	21	21.9	2	2.0
MCQ*	30	16.6	45	24.9	34	22.1	32	33.3	7	7.1
Complete sentences (blanks)	2	1.1	5	2.8	9	5.8	13	13.3	79	79.8
Total	181	100	181	100	154	100	96	100	99	100

X^2=410.33   d.f. = 16   P value<0.05

*The missing figures due to the fact that some students did not answer.

**MCQ: multiple choice questions.

Table (3): Frequency distribution of the students by the cause(s) behind their preference and sex.

Causes of preference of the type of questions	Sex				Total	
	Male		Female			
	No.*	%	No.*	%	No.*	%
Easy memorization of Subject for (Essay)	43	29.2	90	39.1	133	35.3
More chance of success for (MCQ)	37	25.2	70	30.4	107	28.4
Less time needed for answering questions for(Single choice question)	28	19.0	46	20.0	74	19.6
Less time for revision of subject required for(Matching)	25	17.1	14	6.1	39	10.3
Presence of guessing for(Matching)	14	9.5	10	4.4	24	6.4
Total	147	100.0	230	100.0	377	100.0

X^2=17.39   d. f. = 4   P value <0.05   *No: number

Table (4): Frequency distribution of the teachers by type(s) of question preferable by them and the level of choice.

Type of question	Teaching subject	Level of choice				
		1st	2nd	3rd	4th	5th
Essay	Basic	1	0	1	0	1
	Clinical	2	6	7	1	1
MCQ*	Basic	2	2	1	1	0
	Clinical	8	6	3	0	0
Single choice	Basic	4	0	1	1	0
	Clinical	7	3	3	1	0
Matching	Basic	0	0	2	0	0
	Clinical	1	2	3	6	1
Complete Sentences(blanks)	Basic	0	0	0	0	0
	Clinical	1	0	0	3	5
Total Basic		7	2	5	5	1
Clinical		19	17	16	16	7

*MCQ: multiple choice questions.

Table (5): Frequency distribution of the teachers by the cause(s) behind their preference and teaching subject.

Causes of preference of type of question	Clinical		Basic		Total	
	No.*	%	No.*	%	No.*	%
Covers wider subjects for single choice question	24	32	7	29.1	31	31.3
Tests depth of subject for essay	11	14.7	3	12.5	14	14.2
Tests concentration for MCQ**	22	29.3	6	25	28	28.3
Less factor of chance present for essay	11	14.7	4	16.7	15	15.2
Easier and needs less time for correction for matching	7	9.3	4	16.7	11	11.0
Total	75	100.0	24	100.0	99	100.0

X^2=1.38   d. f. = 4   P value>0.05

*No.: number

** MCQ: multiple choice questions

Table (6): Frequency distribution of the teachers by their preference to oral part of examination.

Teaching subject	Yes		No		Total	
	No.*	%	No.*	%	No.*	%
Clinical	15	78.9	4	21.1	19	100.0
Basic	5	71.4	2	28.6	9	100.1
Total	20	76.9	6	23.1	38	100.0

X^2=0.18   d. f. = 1p value>>0.05   *No.: number

Table (7): Frequency distribution of the teachers by their positive response about the oral examination.

Causes of positive opinion	Clinical		Basic		Total	
	No.*	%	No.*	%	No.*	%
Tests conversation	17	18.5	4	20	21	18.8
Tests language more	17	18.5	4	20	21	18.8
Tests confidence	22	23.8	3	15	25	22.3
Tests reasoning &logic ability	18	19.6	5	25	23	20.5
Tests attitude & style	18	19.6	4	20	22	19.6
Total	92	100.0	20	100.0	112	100.0

X^2=1.54   P value>0.05   (d. f.) = 4   *No.: number

N.B: More than one response is acceptable so total number is more than number of teachers.

Table (8): Frequency distribution of the teachers by their negative response about the oral examination**.**

Causes of negative opinion	Clinical		Basic		Total	
	No.*	%	No.*	%	No.*	%
Being old fashion	2	22.2	0	0	2	12.5
Presence of bias	3	33.3	3	42.9	6	37.5
Variability in Question level	0	0	4	57.1	4	25
Personal effects	2	22.2	0	0	2	12.5
Time consuming	2	22.2	0	0	2	12.5
Total	9	100.0	7	100.0	16	100.0

*No.: number

Discussion:

There is no national process for assessing medical education outcomes as many countries performing across the world. Each medical school in Iraq develops and administers its own assessment measures which mainly assess knowledge, attitude and communication skills. Consequently, the methods of assessing students' knowledge in these medical schools are quite variable from one college to another [1].

In this study, single choice questions (best of five) and essays are the most preferred types of questions by the students. Single choice questions are the 1st choice for 54(29.9) students and essays were the 1st choice for another 55 students. This result is comparable to a study done in the United Kingdom [5]. While in a study done King Faisal University in Saudi Arabia, MCQs were the most preferred questions followed by essays. According to that study, the important stated reasons for their preference were easy memorization and more chance of getting the correct answer which is comparable to this study [6].

The issue of why some students prefer MCQs while some others prefer essays has been discussed in previous studies. It has been suggested that students with a deep study approach tend to prefer essay - type questions, while students with a superficial or surface study

approach tended to prefer MCQ. Test anxiety seems to be another variable that can lead to specific attitudes towards assessment formats: students with high test anxiety have more favourable attitudes towards MCQs while those with low test anxiety tend to prefer open-ended formats. Clearly, students with a high level of test anxiety strive towards more certainty within the assessment situation [7].

According to the teachers, single choice questions (best of five) and MCQs are the most preferred types of questions. With the single choice questions being the first choice for 11 teachers and MCQs are the 1st choice for other 10 teachers. The most frequent causes behind their preferences are covering wider subjects and testing students' concentration in depth.

MCQs allow a better chance for success. Furthermore, the scoring criteria for any certification or licensing exam must be public and explicit; MCQs meet these standards better than do essays or oral examinations [8]. However, a study done in the UK reveals that imprecise term occurs commonly in MCQs used in medical education in the UK [9].

In the present study, oral test are preferred by most of the teachers (79%) in Kirkuk College of Medicine. Testing confidence of the students was the most common stated reason for preference (23.8%). Oral exams are the least preferred type of assessment in the King Faisal University in Saudi Arabia [6].

The study by van de Waterling et al also showed a lower preference for direct assessment methods such as oral tests. In their study they mentioned that one of the reasons for this could be that the students in their school were not very familiar with this method of assessment [10]. One of the reasons mentioned by

some teachers in our study (who do not prefer oral exams) was that oral examinations may be affected by a lack of objectivity and examiner biases.

Conclusion:
Essays and single choice questions are the most preferred question by the students. Easy memorization of the subjects (35.3%), more chance of success (28.4%) and the less time needed for answering questions (19.6%) are the most common explanations. Teachers mostly preferred single and multiple choice questions for reasons of covering wider subjects (31.3%), testing students' concentration (28.3%) and less factor of chance present (15.2%); oral exams were preferred by many teachers (79%) for being better tool in testing students' confidence, attitude, conversation and reasoning.

Recommendations:
While it is not possible to tailor assessments completely according to student preferences, these can be certainly modified to accommodate student preferences, thus, helping to improve student performance. To our knowledge, this is first study conducted in medical colleges and opens the door to be completed in other colleges in Iraq for constructing the best pattern of examination designs to our students in the hope of keeping the standard of Iraqi medical colleges within the acceptable levels to comparable schools in the world.

Acknowledgement:

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