

# Knowledge Assessment of Newly Graduated Doctors Regarding Medical Educational Method in Their Colleges and Certain Essential Medical Skills in Ibn-Sinna Teaching Hospital / Mosul / Iraq

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## Abstract

Medical education is a long, time consuming process. The reality is that it never ends, even after an individual graduates from medical school, there is a constant need to learn new and updated information .

A descriptive study was conducted on newly graduated doctors who are working in Ibn – Sinna hospital / Mosul / Iraq during the period from 1<sup>st</sup> July till 30<sup>th</sup> August / 2012 to assess their level of knowledge regarding the current medical educational method and the main essential medical skills .

The study show majority of doctors are female ( 52.2% ) , aging between 20-25 years ( 85.7% ) . 61.8 % of them preferred combined method of medical education (Lecture based and Problem based) because this method graduated doctors with both good information and efficient skills level .

**Keywords:** Newly doctors , current medical educational method , knowledge assessment

## 1. Introduction

The 'Glossary of Medical Education Terms' was prepared with the intention of assisting communication among medical educators. The developed formulations of educational definitions, terms and methods derived from different sources such as dictionaries, encyclopedias, glossaries, articles and the Internet. The attempt was made to present the most broadly accepted views as clearly as possible. The greatest difficulty is that quite often there are significant differences in definitions of the same or similar concepts and terms. Unfortunately, this is often the case in multi-professional fields such as medical education <sup>(1)</sup>

Medical education is education related to the practice of being a medical practitioner, or healthcare related providers either the initial training to become a physician (i.e., medical school or across the various disciplines of health professionals [dental schools, pharmacy school, therapy schools etc] and additional training thereafter like residency and fellowship , or physician assistant education <sup>(1)</sup>

The main goals of medical education are: to provide a core curriculum that integrates the clinical applications of basic sciences concepts throughout the six years curriculum, as well as introduces students to the interviewing and practice examination skills that considered integral thing to the practice of medicine, and the student will be able to **acquire, master** and use basic clinical motor and cognitive skills including problem solving and clinical reasoning, essential to practicing medicine <sup>(2)</sup> , to choose the appropriate and practical clinical skills to apply in a given place , to recognize serious illness and to perform common emergency and life saving procedures such as caring for the unconscious patient and cardiopulmonary resuscitation <sup>(3)</sup> , and to maintain standards of medical practice at the highest possible level throughout a professional career <sup>(4,5)</sup> .

The recent trend in medical education which reflects the major shifts in educational paradigms arising from reappraisals of the relevance and the effectiveness of traditional medical education in the context of fast changing, complex and ever increasing demands on the health care delivery system, including the changing patterns of disease. Therefore it is essential to see medical educators continue to evaluate and introduce innovations into their curriculum aiming to achieve appropriate outcomes for their graduates; to enable them to meet the healthcare needs of the society locally and globally <sup>(6)</sup> .

Quality improvement in medical education is very important because <sup>(7)</sup> .,

1- Good education is a goal of each teacher and every academic institution .

2- Good quality of medical education is a vital prerequisite to ensure quality of future physicians to provide adequate health care services , researchers and teachers

3- Good quality of medical education can make students of today colleagues in tomorrow

Quality improvement projects led by junior doctors are generally associated with improved care processes but the impacts on junior doctors' skills and interest in quality improvement and the longer term impacts on patient outcomes remain uncertain <sup>(8)</sup> .

Most medical schools are experiencing difficulties in providing the right quality and quantity of educational experiences as the curricula have failed to respond to the needs of the community and country<sup>(8,9)</sup>.

## **2. Aim of the study :-**

The study aimed to assess the knowledge of newly graduated doctors regarding the current medical educational method in their Colleges and certain essential medical skills in Ibn- Sinna teaching hospital / Mosul / Iraq

## **3- Objectives of the study :-**

- 1- To determine the socio- demographic characteristics of the study doctors
- 2- To detect the main preferable medical educational strategies and teaching methods .
- 3- To find out the suitability of their educational methods for preparing a future doctors
- 4- To assess the knowledge of newly graduated doctors regarding certain medical condition

## **4- Subjects and Methods**

Official permission was taken from the Nineveh health directorate and written consent was taken from each newly graduated doctors before establishing the study .

A descriptive cross- sectional study was carried out in Ibn- Sinna Teaching Hospital / Mosul / Iraq . All the available present doctors at the time of data collection were included in the study and a questionnaire form was conducted after receiving the written consent from them and the data was collected by interviewing with the study doctors ..

The study was conducted during the period from 1<sup>st</sup> July /2012 till 30<sup>th</sup> August / 2012

A special questionnaire form has been prepared by the investigator utilizing available related literature which include the following main items :

Part-1- Demographic characteristics including (sex, age, residence and college of graduation )

Part-2- Newly graduated doctors opinions regarding current medical educational methods and teaching strategies.

Part-3- Newly graduated doctors opinion regarding the suitability of their medical educational method in preparing a future doctors .

Part -4- Newly graduated doctors knowledge assessment regarding certain medical skills .

The study questionnaire form have been led for discussion by a committee consist of (8) community medicine specialist and (2) experts in medical statistics .

They gave a reliability index of 80% . Descriptive statistics by using ( number, percent ) .

The knowledge assessment of them was done by a 5 points scale for each procedure ranges from 0 to 4 and then percentages for every component converted to mean value of that component and certain equation was used to calculate the satisfaction index<sup>(10)</sup> :-

$$\frac{[(\% \text{ of } 0 \times 1) + (\% \text{ of } 1 \times 2) + (\% \text{ of } 2 \times 3) + (\% \text{ of } 3 \times 4) + (\% \text{ of } 4 \times 5)] \times 20}{100}$$

Where :-

100 — Number of participants ( used 100 in the denominator instead of actual number because percentage of participant applied in the nominator).

20 --- Multiply by 20 to convert the result into percentage<sup>(10)</sup> .

Chi—square was used and p value at the level of  $\leq 0.005$  was considered significant .

## 5- Results .

### 5.1 Socio demographic distribution of study sample

Table (1): Socio- demographic characteristics of the study newly graduated doctors

Socio- demographic parameter		Number(N=21)	Percent
Gender	Male	9	42.8
	Female	12	57.2
Age group (in years)	20-25 years	18	85.7
	26-30 years	3	14.2
Residence	Inside Mosul	13	61.9
	Outside Mosul	8	38.1
College of graduation	Tkrit medical college	5	23.8
	Mosul medical college	13	61.9
	Baghdad medical college	2	9.5
	Kirkuk medical College	1	4.7

Table 1 show that majority of newly graduated doctors are female ( 57.2% ) , ( 85.7%) aging between 20-25 years, ( 61.9% ) living in Mosul city .and ( 61.9% )of them are graduated from Mosul medical College .

### 5.2 Study sample knowledge regarding the medical educational method

Table (2): Frequency distribution of newly graduated doctors according to their preferred method of medical education

Preferred medical educational method	Newly graduated doctors ( N= 21)						P- Value* < 0.005
	Agree		Disagree		Total		
	No.	%	No.	%	No.	%	
Traditional methods (LBL)	2	9.6%	0	0.0%	2	9.6%	
Innovative methods (PBL)	3	14.3 %	3	14.3%	6	28.6%	
Combined method (LBL+PBL)	13	61.8 %	0	0.0 %	13	61.8%	

\*  $\chi^2$  – test was used

Table 2 show that (13-- 61.8 % ) newly doctors preferred combined method of medical educational method and teaching strategies , and this result is agreed with Katrina /2010<sup>(11)</sup> who present a study among doctors working in Nepal/ South Africa and she found that new doctors preferred a modern method of teaching depending on clinical skills and practicing with more emphasis on emergency management of acute cases.

Ghanim .etal / 1997<sup>(12)</sup> published a research on the main difference between problem based learning in comparison with subject or lecture based learning on 3 medical colleges including (Tikrit, Mosul and Basrah ) / Iraq to discover early the importance of professional skills they need to acquire during study years.

They found that more than 50% from Tikrit indicated the importance of 15 skills compared with 5% only from Mosul and Basrah, and this is attributed to the effect of the problem- based objective curriculum adopted by Tikrit only as compared with subject – based curriculum adopted by Mosul and Basrah colleges

### 5.3 Study sample knowledge regarding the suitability of their educational methods

Table (3): Frequency distribution of newly graduated doctors according to their opinions about the current medical educational method in their colleges in preparing adequate efficient future doctors

Suitable medical educational method for future needs	Newly graduated doctor ( N== 21)				p- * Value
	Traditional Colleges Mosul + Baghdad + Kirkuk N= 16		Innovative College Tikrit N= 5		
	No	%	No.	%	
Agree	4	25%	4	80%	0.671
Disagree	12	75%	1	20%	
Total	16	100%	5	100%	

\*  $\chi^2$  – test was use

Table 3 show that newly doctors from traditional medical colleges disagreed that the current medical educational method in their colleges is suitable for preparing a future efficient doctors (75%) while newly graduated from innovative college agreed with the suitability of their medical educational method (80%) . This result is agreed with another study done by Michael etal /2010<sup>(13)</sup> who conducted a study in Oxford University and they found that 5.6% of junior doctors strongly agreed that their medical school had prepared them well for future jobs they had undertaken so far, 42.7% agreed, 20.9% neither agreed nor disagreed, 23.6% disagreed, and 7.2% strongly disagreed.

Andrew / 2006<sup>(14)</sup> described a study on first year post graduate doctors at Auckland District Health Board / New Zealand to determine whether the current knowledge and skills documented for post graduate year 1 (PGY1) are appropriate and accurate reflection of the experience during study years and he presents that 21% of doctors preformed the skills accurately and a bout 39% of them exactly demonstrated the procedures in details and they knew the necessary knowledge regarding them .Goldacre etal conducted a study / 2008<sup>(15)</sup> in Manchester medical college/ UK to determine the current regulation of medical training in producing professionals who invariably look competent on paper but are not necessarily competent and confident in reality .. They said that knowledge levels are significantly good for essential medical emergency cases like endotracheal intubations and asthmatic management due to enough practical training hours in comparison to theoretical hours .

Table 4 show that newly graduated doctors got a high satisfaction index in ECG doing and reading (83.7 %) while for clinical competence knowledge they show a low satisfaction index in dealing with bronchial asthma management , pulmonary edema, and , Dysrhythmias .

Farhana /2012<sup>(16)</sup> in Canada medical school who found that Junior doctors are often show acceptable satisfaction knowledge regarding management of high fever and intravenous injection because of several attending courses which can vary widely in nature in order to prepare them for good tomorrow’s doctors during their study years . Farhana assessed in her study the main attending courses during undergraduate medical training programs include: ( Grand Rounds, Case study clinical meeting , Support and monitoring program , modular courses in teaching and learning on the run with advanced and immediate life support and finally medical emergency team training ) .

#### 5.4 Study sample assessment of certain essential medical skills

Table (4) Frequency distribution of newly graduated doctors according to their knowledge about some of certain essential medical skills / procedure

Percentage of newly graduated doctors (N=21)						
Skills related knowledge regarding the main medical skills	Never heard about the procedure / skill Score 0	Know the principle only Score 1	Observed done by the teacher on a model Score 2	Done on patient / model with supervision of the teacher Score 3	Have done independently on a patient Score 4	Mean satisfaction index
1-Ensuring I.V line	0 0.0%	6 28.5%	3 14.3%	9 42.9%	3 14.3%	68.6
2- Performing defibrillation procedure	2 9.5%	3 14.3%	2 9.5%	5 23.9%	9 42.8%	75.2
3- Do and read an ECG trace	0 0.0%	0 0.0%	7 33.4%	3 14.3%	11 52.3%	83.7
4- Endotracheal intubations	0 0.0%	2 9.5%	5 23.9%	6 28.5%	8 38.1%	79.0
5- Clinical medical emergencies						
A- Chest pain	0 0.0%	4 19.1%	11 52.3%	3 14.3%	3 14.3%	64.1
B-- Pulmonary edema	0 0.0%	10 47.7	8 38.1	1 4.7 %	2 9.5%	55.2
C- Bronchial Asthma	0 0.0%	14 66.7 %	5 23.9 %	1 4.7 %	1 4.7 %	49.4
D- Dysrhythmias	0 0.0%	5 23.9 %	13 61.9 %	2 9.5%	1 4.7 %	59.0
E- Diabetic ketoacidosis	0 0.0%	3 14.3 %	14 66.7 %	2 9.5 %	2 9.5%	62.8

#### 6- Conclusion

The study concluded that Majority of newly doctors preferred the combined methods of medical education also they agreed that their medical educational method in their Colleges are not suitable in preparing a future doctors because there is a real the differences between the traditional Colleges and innovative College , there was a defect in skills and clinical competence parameters among students graduated from traditional Colleges while the defect among newly doctors graduated from innovative College was in the knowledge level Newly doctors graduated perform a good knowledge level regarding ECG doing and defect in managing a bronchial asthma.

#### 7-References

- 1- Ende, J. (2009) , “ Feedback in clinical medical education” , *JAMA* , 250, 777-781.
- 2- Kawai, Y., Yazaki, T., Matsumaru ,Y., Senzaki, K., & Asai ,H. (2007) , “Comparative analysis of learning

effect for students who experienced both lecture-based learning and problem-based learning in a complete denture course”, *Nihon Hotetsu Shika Gakkai Zasshi*, 51(3), 572-81.

- 3- O'Neill, PA., Jones, A., Willis, SC., & McArdle ,PJ. (2003) , “Does a new undergraduate curriculum based on Tomorrow's Doctors prepare house officers better for their first post?” A qualitative study of the views of pre-registration house officers using critical incidents. *Medical Education*, 37(12), 1100-1108.
- 4-Norman, G. (2002) , “Research in medical education: three decades of progress.” *BMJ* , 324, 1560-2.004.
- 5- Chalabian, J., & Dunnington ,G.( 1997 ) “Standardized patients: a new method to assess the clinical skills of Physicians” *Healthcare*, 2,174–7.
- 6- Stillman, PL., Wang ,Y.,& Ouyang ,Q.(1997) , “Teaching and assessing clinical skills: a competency-based programme in China”, *Med Education* , 31,33–40.
- 7-- Cohen ,JJ. (2002) , “Our compact with tomorrow’s doctors” , *Acad Med* , 77, 475–80.
- 8- Azim ,MA. , Urba ,D., & Sayeeda ,R. (2004) , “Trends in medical education: challenges and directions for need – based reforms of medical training in South East Asia”, . *Indian Med Science j* , 58(9), 369-380.
- 9-Gastel ,B. , & Rogers, D E .(1989) , “Clinical education and tomorrow doctor” . *New York Academy of Medicine, New York*.
- 10- Gallagher, T. (2013) "The resurrection of Gilbert Brule". The Vancouver Province.
- 11- Katrina , B. , Mark, Z. , Bruce, H. ,& Steve K. (2010) , “Needs assessment for continuing medical education amongst doctors working in rural Nepal” , *South –East Asian Journal of Medical Education* , 4(1) , 34- 37 .
- 12-Ghanim, Y., Abed, I.M. , & Nabeel , D. (1997) , “The effect of objective study on the attitude of medical students towards their future professional skills” , *Med. J Tikrit Univ*, 3 , 209- 214 .
- 13- Michael ,J., Goldacre, K T., & Trevor ,W L.(2010) , “Views of junior doctors about whether their medical school prepared them well for work”, questionnaire surveys, *BMC Medical Education*, 10,78 .
- 14-Andrew, O., Gill ,N. , &Stephen ,C. (2006) , “Procedural skills of first – year post graduated doctors at Auckland District Health Board” , *New Zealand NZ Med J*, 17(119) , 1229.
- 15- Goldacre, MJ. , Davidson, JM. , & Lambert ,TW.(2008) , “Doctors’ views of their first year of medical work and postgraduate training in the UK: questionnaire surveys”. *Med Educ* , 37(9),802-8 .
- 16- Farhana, Ara .(2012), “Choosing the right course for training program to junior doctors” , *Med Educ J* , 2 , 2-5 .

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