https://doi.org/10.15218/zjms.2017.006

Views of Erbil interns on the adequacy of undergraduate clinical skills training

Received: 18/2/2016 Accepted: 24/4/2016

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Abstract

Background and objective: One of the fundamental aims of all medical schools is to ensure that medical graduates are prepared to start work safely as junior doctors. The transition of medical students to junior doctors has long been considered a primary practice of passage. In Iraqi Kurdistan Region, a two year internship (residency) is mandatory for medical graduates' registration as practitioner doctors. This study aimed to determine the perceptions of Erbil intern on whether undergraduate clinical skills training adequately prepared them for internship responsibilities.

Methods: This descriptive cross-sectional analytical study included 369 interns working in the public hospitals of Erbil Governorate. A questionnaire including two sections: the first is interns' demographic characteristics and the second is their views on clinical skills training (communication and practical). The collected data was analyzed by the statistical package for the social sciences (version 19.1).

Results: Out of the 369 interns, 213 were filled the questionnaire. The majority of them felt that their undergraduate communication skills training were adequate in all the studied areas. However, more than half of the respondents felt that undergraduate practical skills training were inadequate in several areas. Female interns felt that training was adequate in all areas of communication and practical skills more than males with a statistical difference in female catheterization (P <0.001). Interns of <30 years old felt that they received more than adequate training in both areas of communication and practical skills than those of ≥30 years old with a significant difference in interviewing patients (P = 0.047), measuring blood pressure (P = 0.023), Pap smear (P = 0.043), and resuscitation - basic cardiopulmonary resuscitation (P = 0.001).

Conclusion: This study suggests that there are deficiencies in undergraduate practical skills training particularly in specific areas. Deficiencies presented by the interns should be considered and addressed. In-depth studies are required to identify ways to improve training.

Keywords: Internship and residency; Medical school; Clinical skills training.

Introduction

The transitional phase of medical students to junior doctors has long been considered a primary practice of passage.[1] However, there are concerns whether these medical graduates are well prepared for their internship.[2] International research confirms that this transition is frequently experienced as very stressful.[3-5] Incomplete preparation during undergraduate clinical training and inadequate education for the newly graduated doctors while entering clinical practice, have been identified as the major contributing factors to this stressful transition.[5] It has been observed that medical students do not feel sufficiently prepared for internship.[6-8] In addition, communication difficulties and emotional involvement remained major factors in the transition from being medical student to internship.[9-10] During the past two decades in particular, in response to the fast pace

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https://doi.org/10.15218/zjms.2017.006

of scientific developments and changing societal expectations and values, some radical reforms in education and training have taken place across the globe.[11-13] In 1993, the UK's General Medical Council (GMC) first introduced "Tomorrow's Doctors," which set standards designed to ensure that those graduating from medical schools would be better equipped to deal with the demands of modern medicine and further education.[14] Emphasis was placed on integrating the applied sciences and clinical skills with communication skills and the legal and ethical aspects of medicine. An update of the guidelines in 2003 placed increasing emphasis on learning about the clinical realities faced by new doctors by stipulating the provision of opportunities for students to shadow junior doctors.[15] A third version of Tomorrow's Doctors (2009) has been published and "has responded specifically to concerns about scientific education, clinical skills, partnership with patients and colleagues and commitment to improving health care and providing leadership".[16] In Manchester University, where problem-based learning has been introduced, the graduates appeared better able to deal with uncertainties and were also more aware of their personal limits and the need to assert their rights for support when they felt that these limits had been reached.[17] This study aimed to determine the views of Erbil interns regarding the adequacy of undergraduate clinical (communication and practical) skills training, determining the areas of deficiencies, and identifying ways to improve undergraduate training through their response in the light of their comments.

Methods

Design, setting and time of the study:
This descriptive cross-sectional survey was conducted involving all interns working in public hospitals of Erbil Governorate from the period of June 1st through August 1st, 2014.

Sample size and sample selection:
All interns of Erbil Governorate in their first and second year of residency (internship) were asked to participate voluntarily in the study within the period of conduction of the study.

Questionnaire:
A self-administered questionnaire was used. It consisted of two parts: the first being participants' demographic characteristics (gender, age group, and the year of internship), and the second was questions regarding their views whether undergraduate medical training adequately equipped them in the areas of communication, history-taking, physical examination, diagnosis, patient management and practical procedures. The Likert scale used to assess the respondents' perceptions of communication and practical skills training, with 1 = grossly inadequate, 2 = poor, 3 = satisfactory, 4 = good, 5 = excellent, and 6 = not applicable. Likert scores of 1, 2 and 6 were combined as inadequate, while Likert scores 3, 4 and 5 were combined and considered as adequate.[18]

Statistical analysis:
The statistical package for the social science (SPSS, version 19.1) used for data entry and data analysis, appropriate statistical tests for both categorical and numerical variables used. A *P* value of ≤0.05 was regarded as statistically significant. Chi-square test was used for finding associations between different communication and clinical skills with the adequacy of training, gender and age groups.

ETHICAL CONSIDERATION:
All interns were informed about the aim of the study and verbal consent before participation in the study was taken. The research protocol was reviewed and approved by the Scientific and Ethics Committee of Kurdistan Board for Medical Specialties. The anonymity of the interns was preserved.

https://doi.org/10.15218/zjms.2017.006

Results

The study included all interns working at the public hospitals in the seven health districts which are run by Directorate of Health (DoH) of Erbil Governorate. The number of the interns was obtained from the Planning Department of Erbil Directorate of Health. The total number of interns in all hospitals involved in this study was 369, of which 213 (57.7%) responded to the study; 87 (41.2%) males and 124 (57.8%) females. Although the total number of participants was 213, not all of them answered all the questions. This may explain the total number of some variables like age and residency rate that showed 206 and 211, respectively. Most of the interns were <30 years old 170 (82.5%) and more than half (54%) were in the second year of internship (Table 1).

Table 1: Demographic characteristics of interns in the study, N=213.

Demographic data		Frequency	Percent
Gender	Male	87	41.2
	Female	124	58.8
	Total	211	100
Age group	<30	170	82.5
	≥30	36	17.5
	Total	206	100
Residency year	1st year	97	46.0
	2nd year	114	54.0
	Total	211	100

https://doi.org/10.15218/zjms.2017.006

Table 2 shows respondents' views on the adequacy of clinical skills training in medical school. Most of the interns felt that their undergraduate training was adequate in all areas of communication skills training with statistical significance (*P* <0.001) that included interviewing the patients (72.8%) communicating with patients' families (71.4%), providing information (69.5%), familiarity with common diseases (68.1%), dealing with angry patients (66.8%), communication with staff (66.7%), and breaking bad news (63.0%). Majority of the interns felt that training was adequate in the practical skills of measuring blood pressure (77.8%, *P* <0.001), measuring blood sugar (71.9%, *P* <0.001), use of drugs (69.5%, *P* <0.001), and resuscitation - basic CPR (66.2%, *P* <0.001). Majority of participants felt that training was inadequate in taking Pap smear (77.5%, *P* <0.001); meanwhile more than half of the interns felt that training was inadequate in the practical skills of male catheterization (62.7%, *P* <0.001), and setting IV line (58.2%, *P* = 0.016).

Table 2: Respondents' views on communication and practical skills training in medical school, N=213.

Skills	Inadequate No. (%)		Adequate No. (%)		Total	*P* value
Familiarity with common diseases	68	31.9%	145	68.1%	213	<0.001
Interviewing patients	58	27.2%	155	72.8%	213	<0.001
Giving information	65	30.5%	148	69.5%	213	<0.001
Breaking bad news	78	37.0%	133	63.0%	211	<0.001
Dealing with angry patients	70	33.2%	141	66.8%	211	<0.001
Communicating with patients' families	60	28.6%	150	71.4%	210	<0.001
Communicating with staff	71	33.3%	142	66.7%	213	<0.001
Measuring BP	47	22.2%	165	77.8%	212	<0.001
Taking intravenous blood	117	55.5%	94	44.5%	211	0.113
Setting IV line	124	58.2%	89	41.8%	213	0.016
Measuring blood sugar	59	28.1%	151	71.9%	210	<0.001
Male catheterization	131	62.7%	78	37.3%	209	<0.001
Female Catheterization	98	46.4%	113	53.6%	211	0.302
Pap smear	165	77.5%	48	22.5%	213	<0.001
Resuscitation - Basic CPR	72	33.8%	141	66.2%	213	<0.001
Putting airway tube	109	51.2%	104	48.8%	213	0.732
Defibrillation	100	47.2%	112	52.8%	212	0.41
Use of drugs	65	30.5%	148	69.5%	213	<0.001

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In Table 3, the majority of female interns felt that training was adequate in all areas of communication and practical skills (except Pap smear) more than males without a statistical difference, except in female catheterization (P <0.001). Males felt that training was adequate more than females in male catheterization and Pap smear with significant differences (P <0.001 and P = 0.010, respectively).

Table 3: Difference in perceptions of the adequacy of undergraduate communication and clinical skills training between males and females, N=213.

Skill	Gender No. (%)			
	Male	Female	Total	*P* value
Familiarity with common diseases	65 (45.5%)	78 (54.5%)	143 (100%)	0.071
Interviewing patients	61 (39.9%)	92 (60.1%)	153 (100%)	0.514
Giving information	56 (38.4%)	90 (61.6%)	146 (100%)	0.203
Breaking bad news	55 (41.4%)	78 (58.6%)	133 (100%)	0.963
Dealing with angry patients	60 (42.6%)	81 (57.4%)	141 (100%)	0.580
Communicating with patients' families	64 (42.4%)	87 (57.6%)	151 (100%)	0.590
Communicating with staff	52 (37.1%)	88 (62.9%)	140 (100%)	0.090
Measuring BP	64 (39.0%)	100 (61.0%)	164 (100%)	0.224
Taking intravenous blood	39 (41.5%)	55 (58.5%)	94 (100%)	0.946
Setting IV line	35 (39.8%)	53 (60.2%)	88 (100%)	0.716
Measuring blood sugar	66 (43.1%)	87 (56.9%)	153(100%)	0.361
Male catheterization	49 (60.5%)	32 (39.5%)	81 (100%)	<0.001
Female Catheterization	23 (20.2%)	91 (79.8%)	114 (100%)	<0.001
Pap smear	27 (57.4%)	20 (42.6%)	47 (100%)	0.010
Resuscitation - Basic CPR	55 (39.6%)	84 (60.4%)	139 (100%)	0.495
Putting airway tube	44 (42.7%)	59 (57.3%)	103 (100%)	0.668
Defibrillation	52 (46.4%)	60 (53.6%)	112 (100%)	0.103
Use of drugs	67 (45.6%)	80 (54.4%)	147 (100%)	0.052

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Table 4 shows that those interns with <30 years old felt that they received adequate training in both areas of communication and practical skills with significant difference in interviewing patients (*P* = 0.047), measuring BP (*P* = 0.023), Pap smear (*P* = 0.043), and resuscitation - basic CPR (*P* = 0.001).

Table 4: Difference in perceptions of the adequacy of undergraduate communication skills and clinical skills training between age groups, N=213.

Skill	Age Group No. (%)			
	<30	≥30	Total	*P* value
Familiarity with common diseases	120 (85.1%)	21 (14.9%)	141(100%)	0.151
Interviewing patients	127 (85.8%)	21 (14.2%)	148(100%)	0.047
Giving information	119 (83.2%)	24 (16.8%))	143(100%)	0.693
Breaking bad news	109 (85.2%)	19(14.8%)	128(100%)	0.203
Dealing with angry patients	112 (81.8%)	25 (18.2%)	137(100%)	0.681
Communicating with patients' families	117 (80.1%)	29 (19.9%)	146(100%)	0.159
Communicating with staff	116 (85.3%)	20 (14.7%)	136(100%)	0.145
Measuring BP	138 (85.7%)	23 (14.3%)	161(100%)	0.023
Taking intravenous blood	69 (77.5%)	20 (22.5%)	89(100%)	0.100
Setting IV line	68 (81.9%)	15 (18.1%)	83(100%)	0.853
Measuring blood sugar	124 (82.7%)	26 (17.3%)	150(100%)	0.930
Male catheterization	66 (85.7%)	11 (14.3%)	77(100%)	0.352
Female Catheterization	94 (86.2%)	15 (13.8%)	109(100%)	0.137
Pap smear	31 (72.1%)	12 (27.9%)	43(100%)	0.043
Resuscitation - Basic CPR	119 (88.8%)	15 (11.2%)	134(100%)	0.001
Putting airway tube	84 (85.7%)	14 (14.3%)	98(100%)	0.251
Defibrillation	92 (86.0%)	15 (14.0%)	107(100%)	0.174
Use of drugs	118 (83.7%)	23 (16.3%)	141(100%)	0.517

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Discussion

The Ministry of Health (MOH) in Iraqi Kurdistan Region mandates that every doctor required undergoing an internship training program for a period of two years to be conducted on a rotational basis in each of the four main specialties: Medicine, Surgery, Pediatrics, and Obstetrics-Gynecology, as well as other branches such as ophthalmology, ear, nose, and throat-ENT, dermatology, etc. Successful completion of this internship is very critical for these junior doctors in practicing medicine. This overwhelming responsibility of an intern is in contrast to the predominant observer status as a medical student. We conducted this study to examine the perceptions of the interns on the adequacy of their undergraduate clinical skills training as it is very crucial for their future practice especially when they will have major responsibilities in the rural areas and district hospitals, and to highlight the weak points to be given a special emphasis in medical curricula. Until recently, medical school curricula have concentrated on promoting knowledge, together with the ability to take history, examine patients effectively and formulate a reasonable diagnostic hypothesis.[6] Even in developed countries medical graduates have been perceived to be deficient in the basic clinical skills of history taking, physical examination and clinical reasoning, indicating a failure of the medical curriculum.[19-20] In our study, we found that majority of the interns felt that they were adequately trained in areas of communication skills at the college of medicine. This might be because communication skills topics are included as large group theoretical lectures in the curriculum of the third year since 2008 (Ismael SA 2015, personal communication, January 24). These adequacies of training in communication skills include not only core skills like giving information and interviewing patients but also advanced skills like breaking bad news and dealing with angry patients. Breaking bad news and explaining a patient's condition are important skills and must be taken seriously. A study conducted in the United Kingdom in 2005 showed that 78.9% of interns had initiated the breaking of bad news to a patient at least once and 92.3% of them had been involved in explaining a patient's condition.[21] These findings are similar also to a study conducted in Malaysia in which most of the interns felt that they were adequately trained in undergraduate communication skills.[18] Meanwhile, these findings were in contrast to a study in Kenya in which the interns said that they were not taught communication skills in medical college.[22] This may emphasize the impact of the inclusion of communication skills topics in the curriculum, even if they are only given as theoretical lectures as the case at the college of medicine of Hawler Medical University. Regarding practical skills training; our study showed that majority of the interns felt that training was adequate mainly in the areas of measuring blood pressure, measuring blood sugar, using drugs, resuscitation - basic CPR, female catheterization, and defibrillation. While more than half of the interns felt that training was inadequate in the following practical skills: male catheterization, setting IV line, taking intravenous blood, and putting airway tube. Meanwhile, the majority of them felt that training was inadequate in taking Pap smear. This is against the Malaysian study in which majority of the interns felt that they were adequately trained in all aspects of practical skills training in their medical schools.[21] This could be attributed to the difference in curricula adopted in different schools. In spite of that majority of the female interns felt that undergraduate clinical skills training was adequate in both areas of communication and practical training more than males, no statistical difference was recorded (apart from female catheterization). Whereas, male interns reported that undergraduate training was adequate in Pap smear and resuscitation–

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basic CPR more than females. This may be justified by the important role of females in providing emotional support to the patient, as well as the effect of their attitudes and beliefs on the patient's health.[21] Thus, female interns may give greater emphasis to the need for effective communication and practical skills. Most of the interns of the younger age group (<30) perceived that their undergraduate skills training both in communication as well as practical skills was better than older age group (≥30) with statistical significance in interviewing patients, measuring blood pressure, Pap smear, and resuscitation-basic CPR. This is again may improve the importance of inclusion of communication skills topics in the curriculum since 2008, as mentioned previously. In addition, it is possible that the interns who had spent a longer time in their internship periods may have encountered more problems, and therefore felt the inadequacy of their training in such areas. This finding was similar to the Malaysian study in that interns who had done three or more postings felt that their training was inadequate in dealing with angry patients as compared to those who had done only one or two postings.[18] This study couldn't compare interns' views of communication and practical skills with views of other concerned parties (supervisors, patients, medical schools and health authorities) which were not included in the study. At the same time, the actual performance of these skills in practice should be objectively assessed.

Conclusion

There are deficiencies in undergraduate practical skills training, particularly in specific critical areas. Defects addressed by the interns should be considered to improve the ways of clinical training in medical schools. More detailed studies are required to identify ways to improve this training.

Conflicts of interest

The authors report no conflicts of interest.

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