

ORIGINAL ARTICLE

ASSESSMENT OF INTERNS' TRAINING IN THE TEACHING HOSPITALS OF BAGHDAD MEDICAL CITY COMPLEX

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ABSTRACT

The aim: The aim of this study is to assess the training of medical interns in Baghdad Medical City Complex.

Materials and methods: A cross-sectional observational study was conducted in the Medical City Complex, Baghdad. The study targeted all the medical interns who finished year one of internship. A questionnaire form was designed for data collection. A questionnaire form was done according to the Medical Interns' Guideline adopted by the Minister of Health in 2015.

Results: A total of 60 interns filled the questionnaire, their mean age is 27.07 years (SD = 2.04), male respondents constituted 48.3%. Twenty-seven respondents (45%) were from Baghdad Medical College. More than half (58%) of them were singles. The mean pre-internship score was 69.32 (SD = 6.6). About half of the interns (29, 48.3%) have a future interest in surgery. Average preparedness for the internship was reported in 45% of interns. Half of the interns had prior ideas about the internship through variable means. A larger percentage of interns reported average/poor quality of training in different aspects of medical internships. Accepted quality of training (above average and excellent) and average one were reported respectively by 19 (31.7%) and 31 (51.7%) of interns in general surgery, followed by the internal medicine branch. Thirty-one (51.7%) interns were moderately prepared for their future medical careers. Surgeons and general physicians gained better opinions (above average and excellent) from the interns (17, 28.3%, and 13, 21.6%) respectively.

Conclusion: There was a deficiency in the preparedness of newly graduated doctors for the internship. But they reported an average skill performance in major medical branches, and some related laboratory and medical procedures, there was a defect in dealing with emergency cases. The supervision of interns was below average in gynecology and obstetrics units and was good in other branches. The medical school training was poor to help interns in dealing with deaths and legal medicine cases. More than 50% of trainees were prepared for the future medical branches of interest.

KEY WORDS: medical interns, training, Baghdad Medical City Complex

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INTRODUCTION

In the past Medical Internship (MI) was regarded as a Compulsory Rotatory Residential Internship (CRRRI). In the 1940s, there was a big change regarding the newly graduated doctors who started their lifetime careers [1].

It is regarded as a fundamental part of the medical education of undergraduates. Interns are engaged in practice-based learning that helps them in applying their theory and clinical study in medical school [2]. In the period of internship candidates learn clinical skills, face practice clinical procedures, and may learn how to judge clinical cases. These require communication skills to deal with patients [3].

Internship is a period of learning. Interns do not work independently but they work under the supervision of medical teachers. After they complete MI they become registered as a medical practitioner. The duration of the internship gives the trainees a good opportunity to decide their future career planning [4].

The internship training has been developed to involve practice in different specialties. The 1st year includes prac-

tice in major branches of medicine, 3 months for each: general surgery, internal medicine, pediatrics, obstetrics and gynecology. The second year in minor branches of medicine and surgery as dermatology, ophthalmology, orthopedics, etc. and family medicine. During these two years, the intern gains skills and applies his medical knowledge on patient service under supervision [5].

Good quality training depends on many factors that include: knowledge and experience of supervisors, successful supervision, practical training and learning, good health system (including good hospital management and efficient staff). On the other hand, bad quality of training will make the interns distrusting supervisors and disrespect the health system [6].

The main goal of the internship is to provide efficient practical knowledge and experience to junior doctors. They should learn how to perform the necessary skills and manage critical cases in the emergency department. In the sixth year of medical college, medical students are faced with the uncertainty of the prospect of their professional careers.

There are main requirements that should be achieved after completing the medical internship including how to manage patients in the emergency room, how to deal with emergent cases such as road traffic accidents, and work under pressure when there is overcrowding especially if there was a critical event near the hospital like an explosion and all victims are transferred to exact hospital in our country.

Medical graduates in Iraq, after finishing their study and clinical training of medical school, start their internship in hospitals after about six to seven months of graduation.

Nowadays the internship duration is two years in all hospitals of Iraq [7].

This study focuses on the internship in Baghdad medical city, which is the biggest and oldest institution in our country opened in 1970. It contains many departments which include: the main hospital building, containing 12 floors; the child welfare teaching hospital; medical and central laboratories; especial heart diseases center; tuberculosis health center; burn unit; center of liver and kidney transplant; blood transfusion center and 16 floors hospital building of all surgical branches (Ghazi Al- Harriri Hospital).

This huge institute offers thousands of beds to different kinds of patients [7] and it takes about 60 junior doctors where they do their internship in different branches of medicine.

THE AIM

The study was designed to evaluate factors for good training during the medical internship in Baghdad city complex.

MATERIALS AND METHODS

This cross-sectional observational study was done in the Medical City Complex, Baghdad to assess the medical internship training in different complex's hospitals (Baghdad Teaching Hospital, Gazi Al-Hariri as Surgical Hospital, Children Welfare Teaching Hospital, Private Nursing Hospital, and Burn hospital). Medical City Complex is the number one health institution in Iraq and is the center of training of high clinical education in Iraq.

The study targeted all the medical interns who finished their first year of internship in the Baghdad City Complex. A total of 60 interns were enrolled in this survey. A paper questionnaire was designed for data collection and delivered personally by the investigators in the hospitals.

A questionnaire form was planned according to what the newly graduated doctor must know in the Medical Interns' Guideline adopted by the Minister of Health in 2015 (Iraqi ministry of health 2015). It was approved by ten experts in different branches of medical education and management in Baghdad Medical school (neurosurgery, orthopedics, cardiology, pediatrics, and general surgery) with few further modifications.

The questionnaire consisted of six sections. The demographic questionnaire covered age, gender, university of graduate, marital status, province, a prior idea about the

training, pre-internship scores, future specialty interest, and working in the private sector. The second, third, fourth, and sixth parts of the questionnaire asked the participants to rate their preparedness for the internship, the quality of training in different skills and activities after completing the first year of their internship, and the quality of training in the main branches with the quality of supervisors' performance, respectively, using a 5-point Likert Scale ranging from poor, below average, average, good to excellent. The fifth part asked the interns to rate the ability for choosing their future branch of interest in their career using 5- point Likert Scale ranging from Not prepared at all to Extremely prepared.

After data collection, they were analyzed using SPSS software version 21. Ethical approval was granted by the Community Department in Baghdad medical college.

RESULTS

The total number of respondents was 60, their mean age was (27.07 years \pm 2.04), male respondents constituted 48.3% (29), while female respondents constituted 51.7% (31) (Table I).

27 respondents (45%) were from Baghdad Medical College, 12 respondents (20%) from Al-Nahrain Medical College, 10 respondents (16.7%) from Al-Mustansiriya Medical College, 6 respondents (10%) from Al-Kindy medical college, 4 respondents (6.7%) from Al-Anbar medical college and only one respondent from Kirkuk medical college. All of the interns graduated in 2015 and completed one year out of 2 years' internship. About 80% were from Baghdad province, 8.3% from Al-Anbar province, and the remaining were from Basrah, Nineveh, Babylon, Karbala' and An-Najaf. More than half (58%) of them were single, while 41% were married. The mean pre-internship score was 69.32 (SD = 6.6). 86.7% don't work in the private sector to increase their income while 13.3% reported working in the private sector during holidays. About half of the interns (29, 48.3%) have a future interest in surgery (Table I).

The study showed that 27 (45%) interns had average preparedness for the internship and 20 (36.7%) reported poor or below average preparedness as shown in table II.

Table III shows that 30 interns (50%) had a prior idea about internships, 76.6% got some information through workshops, 43.3% read the intern guideline and 50% had activities related to the internship in their curriculum.

Table IV shows that by assessing the quality of training showed variation of opinion across the different aspects of training in medical specialties. These training skills include: Taking history and performing physical examination (only 3.3% said that it was excellent while 18.3% say that it is below average); Giving comprehensive case presentation (18.3% say that it was above average while 25% say it is below average); Maintaining quality medical records (36% say it was below average while 11.7 % say I is above average); Planning appropriate lab & radiological investigations for the inpatient (only 6.7% say that it was excellent while 25 % say it is below average); Attending the morning tour with the responsible

Table I. Demographics of interns

Variable	frequency	Percentage (%)
Age (years)		
26	23	38.8
> 26	31	51.6
<26	6	10
Gender Female male	31	51.7
	29	48.3
University of graduation		
	27	45
Baghdad Al-Kindey Al-Nahrain	6	10
	12	20
Al-Mustansiriya other	10	16.7
	5	8.4
Duration of internship		
2 years	60	100
Province Baghdad Anbar	48	80
	5	8.3
Basrah Babylon Other	2	3.3
	2	3.3
	3	5.1
Marital status		
Married	25	41.7
single	35	58.3
Occupation in private medical sector		
yes no	8	13.3
	52	86.7
Future medical specialty interest		
	29	48.3
Surgery Medicine	19	31.7
Gynecology Pediatric	6	10
	6	10

Table II. Degree of preparedness

	No. of interns	Percent (%)
Poor	4	6.7
Below average	18	30
Average	27	45
Good	10	16.7
Excellent	1	1.7
Total	60	100

seniors and residents and write down their notes (8.3% say it was poor while 11.7% say it was excellent); Attending the clinical and death meetings and grand tours (11.7% of them said it was poor while 3.3% said it was excellent); Mastering interpretations of x-rays, ECG and lab investigations (6.7% of them said it was poor while 3.3% said excellent).

Skills also included: Administration of medications and blood products (1.7% of them say it is poor and excellent); Mastering procedures like pleural aspiration, cannula insertion, NG feeding, urinary catheter insertion (8.3% of them said poor while 1.7% said excellent); Monitoring nursing perfor-

Table III. Pre-internship ideas and awareness means

	Frequency	Percentage (%)
Prior idea about intern-ship		
Yes	30	50
no	30	50
Pre-intern workshops		
Yes	23	38.3
no	7	11.7
Reading guideline		
Yes	13	21.7
No	17	28.3
Internship activities in curriculum		
Yes	15	50
no	15	50

mance in turning the comatose patients (10% said poor while no one chooses excellent); Dealing with legal medicine cases and writing primary reports (6.7% said poor and excellent). It was followed by: Attending ER & managing the emergency cases and resuscitating patients (8.3% said poor while 11.7% said excellent); Working in outpatient clinics (11.7% said poor while 3.3% said excellent); Communication with patients, their relatives (education and counseling (5% said poor while 6.7% said excellent); Working in the delivery rooms,

diagnosing labor, follow-up of its progression (13.3% said poor while 6.7% said excellent); Assisting delivery and suturing associated vaginal wounds (16.7% said poor while 3.3% said it was excellent); Mastering abortion, uterine curettage (23.3% said poor while 5% said excellent); Preparation for surgeries that are performed by residents and physicians (8.3% said poor and excellent); Following patients after operations (5% said poor while 8.3% said excellent); Communicates with other staff and works effectively within the team (1.7% said poor while 8.3% said excellent); Writing discharge summary and coordinating the patients follow-up (10% said poor while 15% said excellent); Seeking advice / knowledge when to refer to others (8.3% said poor while 6.7% said excellent); Mastering procedures like exchange transfusion of neonates (16.7% said poor while 3.3 said excellent).

This table showed that a higher percentage of the interns choose average in assessing the quality of skills and activities during the internship.

Table V shows that 1/3 of the interns reported accepted quality of training (above average and excellent) in general surgery and 1/2 of them reported average quality of training in that branch. This is followed by the internal medicine branch in regard to the quality of training. While training in Obstetrics and Gynecology and Pediatric specialties found to be non-accepted (poor and below average) in (32, 53.4%) and (21, 35%) respectively.

Table VI shows that about half of the interns are moderately prepared for the next level in their careers.

Table IV. Quality of training in different aspects in medical internship

Skills/activities	Poor	Below average	Average	Above average	Excellent
Taking history and perform physical examination	6(10%)	11(18.3%)	33(55%)	8(13.3%)	2(3.3%)
Giving comprehensive case presentation	3(5%)	15(25%)	30(50%)	11(18.3%)	1(1.7%)
Maintaining quality medical records	2(3.3%)	22(36.7%)	29(48.3%)	7(11.7%)	0
Planning appropriate lab & radiological investigations for the inpatient	3(5%)	15(25%)	26(43.3%)	12(20%)	4(6.7%)
Attending the morning tour with the responsible seniors and residents and write down their notes	5(8.3%)	10(16.7%)	25(41.7%)	13(21.7%)	7(11.7%)
Attending the clinical and death meetings and grand tours	7(11.7%)	19(31.7%)	19(31.7%)	13(21.7%)	2(3.3%)
Mastering interpretations of x-rays, ECG and lab investigations	4(6.7%)	21(35%)	24(40%)	9(15%)	2(3.3%)
Administration of medications and blood products	1(1.7%)	19(31.7%)	26(43.3%)	13(21.7%)	1(1.7%)
Mastering procedures like pleural aspiration, cannula insertion, NG feeding, urinary catheter insertion Etc	5(8.3%)	19(31.7%)	25(41.7%)	10(16.7%)	1(1.7%)
Monitoring nursing performance in turning the comatose patients	6(10%)	13(21.7%)	32(53.3%)	9(15%)	0
Dealing with police cases and writing primary reports	4(6.7%)	15(25%)	30(50%)	7(11.7%)	4(6.7%)
Attending ER & managing the emergency cases and resuscitating patients	5(8.3%)	19(31.7%)	18(30%)	11(18.3%)	7(11.7%)
Working in outpatient clinics	7(11.7%)	19(31.7%)	24(40.7%)	8(13.3%)	2(3.3%)
Communicating with patients, their relatives (education and counseling)	3(5%)	15(25%)	24(40%)	14(23.3%)	4(6.7%)
Working in the delivery rooms (diagnose labor, follow its progression)	8(13.3%)	16(26.7%)	24(40%)	8(13.3%)	4(6.7%)
Assisted delivery and suturing associated vaginal wounds	10(16.7%)	19(31.7%)	22(36.7%)	7(11.7%)	2(3.3%)
Mastering abortion, uterine curettage	14(23.3%)	13(21.7%)	28(46.7%)	2(3.3%)	3(5%)
Preparation for surgeries that are performed by residents and physicians	5(8.3%)	14(23.3%)	28(46.7%)	8(13.3%)	5(8.3%)
Following patients after operation	3(5%)	15(25%)	27(45%)	10(16.7%)	5(8.3%)
Communication with other staff and works effectively within the team	1(1.7%)	16(26.7%)	26(43.3%)	12(20%)	5(8.3%)
Writing discharge summary and coordinate patient's follow up	6(10%)	12(20%)	23(38.3%)	10(16.7%)	9(15%)
Seeking advice / knowledge when to refer to others	5(8.3%)	18(30%)	19(31.7%)	14(23.3%)	4(6.7%)
Mastering procedures like exchange transfusion of neonates	10(16.7%)	20(33.3%)	20(33.3%)	8(13.3%)	2(3.3%)

Table VII shows that surgeons and general physicians gained better opinions (above average and excellent) from the interns (17, 28.3% and 13, 21.6%) respectively. While worse opinions about performances were reported about obstetricians/gynecologists and pediatricians (36, 60% and 24, 40%) respectively.

DISCUSSION

Internship is regarded as a fundamental part of the medical education of undergraduates practicing in medicine, it was known as Compulsory Rotatory Residential Internship (CRRRI) [1]. It is an essential part of undergraduate practice in medical school. The interns are engaged in an

Table V. Quality of training in major medical branches

Specialty	Poor	Below average	Average	Above average	Excellent
Pediatrics	14(23.3%)	7(11.7%)	33(55%)	4(6.7%)	2(3.3%)
Obstetrics and gynecology	13(21.7%)	19(31.7%)	25(41.7%)	2(3.3%)	1(1.7%)
Internal medicine	3(5%)	8(13.3%)	33(55%)	14(23.3%)	2(3.3%)
General surgery	3(5%)	7(11.7%)	31(51.7%)	15(25%)	4(6.7%)

Table VI. Interns Level of preparation for their future career

Not prepared at all	Slightly prepared	Moderately prepared	Well prepared	Extremely prepared
2(3.3%)	7(11.7%)	31(51.7%)	18(30%)	2(3.3%)

Table VII. Quality of supervisors' performance in major medical branches

Specialty	Poor	Below average	Average	Above average	Excellent
Pediatrics	10(16.7%)	14(23.3%)	27(45%)	5(8.3%)	4(6.7%)
Obstetrics and gynecology	15(25%)	21(35%)	15(25%)	9(15%)	0
Internal medicine	4(6.7%)	12(20%)	31(51.7%)	8(13.3%)	5(8.3%)
General surgery	4(6.7%)	10(16.7%)	29(48.3%)	11(18.3%)	6(10%)

active practice based on what they have learned in medical schools [2].

During this 2 years' period of internship in Iraq the trainees gain clinical skills, can do some clinical procedures, can learn how to estimate patients' clinical state, also they get the experience in communication with patients and their relatives.

The effective training of medical interns in this study was found to be affected by many factors like effective supervision, support by the institutes, positive attitude of the interns with the teamwork spirit in addition to positive social support. Different studies have a similar role of these factors that enhance the training of medical interns [8].

In this study, about fifty percent of the junior doctors had some idea of what they have to do and how to deal with their new job. Many authors mentioned the deficiency in advice for medical students for their future careers [9].

Regarding interns' future interest, the highly selected branch was general surgery. It might be due to the high income of this branch and the personality of supervisors which were highly cooperative as they were also chosen by interns with the highest level of satisfaction among other supervisor's specialty.

The study of Hannon in assessing the quality and skills of various aspects of the internship year in Ireland was found poor [10], in this study in Iraq there was a good training course in general surgery, internal medicine, pediatrics and gynecology. The best benefit obtained was in general surgery and the lowest was in gynecology.

Anna Dare et al in her study In 2009 [11] clarifies the importance of internship year and the pre-intern year to prepare the graduates of medical school for their future work. This year can increase the interns' skills and enhance their practical and ethical parts.

In this study, the best-chosen skills were: attending the morning tour, Writing discharge summaries and coor-

inating patients, communicating with other staff, and working effectively within the team.

Regarding the interns' ideas on future specialty; this study concentrated on overall preparation for their future career without going into details to figure out whether the study in medical school and the work as interns have prepared them for the next step of career; most of the interns were moderately prepared (51.7%).

It's important for the interns to get a good attitude from their supervisors, the way of communication with patients and all staff, and not only the academic skills and the methods of treatment of their senior doctors [12].

These have an impact on their effectiveness and productivity in the work [13].

CONCLUSIONS

1. Interns reported an average skill performance in major medical branches, and some related laboratory and medical procedures.
2. There are defects in educating and training medical students in units such as the emergency room and management of critical cases.
3. There are deficiencies in the preparedness of newly graduated doctors for the internship.
4. Supervision was below average in gynecology and obstetrics units.
5. Medical school training is poor to help interns in dealing with deaths and legal medicine cases.
6. More than 50% of trainees were prepared for the future medical branch of interest.

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