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Views of Final Years Medical Students About Clinical Skills Acquired Before Graduation at Emirates International University-2022

A Research submitted to complete the requirements for obtaining a Bachelor's Degree MBBS in general medicine and surgery.

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Dedication

We dedicate this research to those how gave us the right environment to receive the prober education we needed

To those who put an effort for us to pass

To our parents

To our teachers

We dedicate this humble research

Acknowledgement

Every project big or small is successful largely due to the effort of a number of wonderful people who have always given their valuable advice or lent a helping hand. We sincerely appreciate the inspiration; support and guidance of all those people who have been instrumental in making this project a success. Our thanks goes to all the faculty members of the Faculty of Medicine and Health Sciences

Especially ***Dr. Moamar Badi*** *for his insightful lectures, guidance, encouragement, patience, and valuable advice that had helped us to carry on the study successfully***.**

List of abbreviations

EIU	Emirates International University
GCS	Glasgow Coma Scale
SPSS	Statistical Package for Social Science
ABG	Arterial Blood Gases
NGT	Nasogastric Tube
LP	Lumbar Puncture
ECG	Electrocardiography
IV	Intravenous
IM	Intramuscular
SC	Subcutaneous
ABCD	Airway, Breathing, Circulation and Disability
CT	Computerized Tomography
IUD	Intrauterine Device
CNS	Central Nervous System
UK	United Kingdom
NARS	National Academic Reference Standards

Abstract:

Introduction:

A clinical skill is any discrete and observable act within the overall process of patient care. Included all those skills required during patient-doctor interactions and in addition communication skills required during interactions with other health professionals as part of patient care. The graduation period is the most difficult period for medical students because it is between a past that was ended where it is supposed that they have acquired clinical skills, experiences and scientific knowledge to qualify them to become competent, willing, able doctors to endure responsibility and working start. This study aimed to know the difference views of medical students at Emirates International University (EIU) about clinical skills that acquired before graduation and their ability and willingness to start work as doctor.

Methodology:

Cross sectional study was conducted on sixth year medical students, graduators and house officers in faculty of human medicine at Emirates International University. Data were collected through self-administrated paper questionnaire containing 67 items that was handed out to183 student. The questionnaire consists of 5 parts, Personal data, General survey, Self-assessment of procedural and Emergency skills, Self-assessment of basic clinical skills, skills related to Obstetrics & Gynecology, and skills related to Pediatric. The data analysis was done by SPSS.

Results:

Regarding to the acquired medical knowledge, almost of students 86.8% were totally satisfied or satisfied on the amount and the quality of acquired medical knowledge, while only 13.2% were not satisfied. The study found that most of students have readiness to start working as a doctor after graduate, where 51.6% and 20.9% reported agree and totally agree respectively, while quarter of students are not ready to work, where 24.7% and 2.7% reported disagree and strongly disagree. Regarding the first

responsible concerned with the weakness status of skills and experience of graduates. the medical students pointed out that 44.3% for delayed payment of financial dues of doctors in the hospital,37.2% for diversity of coaches and their teaching method and 30.1% for Student neglect and absenteeism. While 27.3% and 25.1% respectively, carried the responsibility to insufficient period of training. and non-available of standardized clinical skills books. Based on overall assessment of students for their procedural and emergency skills that have learned during the years of training, near half of final-years medical students 46.5% have the ability with confidence to do procedural and emergency skills. The overall performance regarding of clinical and preclinical skills the study showed, majority of students 81.3% evaluated their selves with good to very good ability to conduct clinical and preclinical skills. The study showed low ability to perform skills related to Pediatric such as neonatal resuscitation and some skills related to Obstetrics and Gynecology such as normal delivery virginally, use instrument that aid deliver, episiotomy doing, IUD insertion and removal and sub-dermal contraceptive implantation)

Conclusion:

this study concluded that, high satisfaction on the amount and the quality of acquired medical knowledge and good readiness among the students to start working as a doctor after graduate. Also this study concluded good ability to perform some skills and low ability to perform the others and the mean reasons for the weakness were, delayed payment of financial dues of doctors in the hospital, diversity of coaches and their teaching method and student neglect and absenteeism.

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Chapter 1: Introduction

1. Introduction

1.1 Background of the subject:

The graduation period is the most difficult period for medical students because it is between a past that was ended where it is supposed that they have acquired clinical skills, experiences and scientific knowledge to qualify them to become competent, fit, able doctors to afford responsibility and working start[1] .

Numerous studies have identified a perception among new medical graduates that they are unprepared for their role as clinicians[2].

Medical doctors routinely practice their clinical skills. Worldwide, both undergraduate and postgraduate medical curriculum planners value the importance of teaching clinical skills to their students, and continuously aim to improve this part of the teaching curriculum to ensure high competency of medical doctors in performing these skills. They developed new bedside teaching curricula, utilized nurses and residents as clinical tutors, used emergency departments, in addition to wards and outpatient clinics for teaching, utilized simulation and standardization methods, and implemented formative assessments, in an attempt to improve clinical skills teaching, and continued to assess the effectiveness of such methods of teaching[3].

Clinical and practical training is the mainstay in the education of medical students, and its methods and tools have greatly advanced in the world through the presence of clinical skills laboratories, simulation-based learning, and virtual patients. Despite the tremendous development in diagnostic techniques, taking the clinical history and physical examination remains the basis for reaching the diagnosis in most cases, and they are the cornerstones of clinical medicine[4]. The patient approach and communication with him remains the most important in qualifying and training students to acquire various basic skills and competencies necessary for safe and effective practice in the future[3].

With respect to preparedness, data suggest that medical graduates were mostly thought to be prepared for: history taking and physical examinations; diagnosis and

management of simple cases which not need to procedural intervention; straightforward communication with patients and their families; straightforward communication with medical colleagues; openness for learning and working in multi-professional teams; everyday practical procedures (eg, taking blood, inserting cannulas); some aspects of using information in the clinical environment (eg, accessing hospital services via computers) and straightforward ethical and legal aspects (eg, obtaining valid patient consent) Regarding unpreparedness, in summary, medical graduates are mostly thought to be less well prepared for: procedural intervention and applying biomedical scientific knowledge to clinical practice; psychosocial aspects of patient care; the high volume of patients requiring history taking and physical examinations; diagnosis and management of complex cases and acutely unwell patients; challenging communication with patients and their families (eg, breaking bad news)[5].

British study indicated that only 4.3% of students strongly agreed that their training in medical school prepared them well for the jobs assigned to them later, and more than a quarter of participants (29.3%) did not agree that their training was adequate[6]. Similar results were shown by a Danish study, through self-assessment, where it was found that none of the participants had the minimum required skills, and only 8% possessed 90% of these skills[7].

Another study conducted at the University of Damascus, the study showed that 30.6% of the students were very dissatisfied with the quality of the education they received, and about half of them, 52.2%, said they were unable to practice medicine independently after graduation, while a quarter of students 24% strongly disagree that there is a role for in their tutors training[3].

In our country there are more than one unpublished study related to this subject, almost of them conducted in the governmental universities. One of these studies showed that more than half of the study sample are dissatisfied with the skills they have acquired, also 69.4% of students are unsatisfied about skills at the time of internship and 54.4% are unable to start work as doctor in the community after

graduation. In addition to that, this study showed the main weakness of the graduate students were in the performance of procedural and emergency skills and skills for women and childbirth, while their performance was good in clinical skills. [25]

There are indications that the lack of confidence is not global but is concentrated on some of the skills that need training in emergency and intensive care units, or when students were participating in patient care with partial responsibility[8].

National Academic Reference Standards (NARS)

Students should be prepared to approach their medical practice acquiring sufficient knowledge of the basic and clinical sciences in an integrated manner, and an understanding of the underlying principles of scientific method. They must be prepared for lifelong learning to remain current in their understanding of the scientific basis of medicine.

On graduation, the graduates must possess all the competencies that enable them to carry out the duties of the house officers during the house officer year; after which they .must possess the competencies essential for working as primary health care providers Professional skills are acquired during the undergraduate education, and continue throughout the house officer year.

The medical school must ensure that before graduation the student will have demonstrated, to the satisfaction of the faculty, the knowledge and understanding, the ,intellectual practical, professional attitude and behaviors, communication, general and transferable skills. [8]

In many countries, similar studies are conducting every year and data and information are collected seriously, in which they are considering the development and improvement of quality of medical education and developing student performance and skills. [1]

1.2 Study justification:

In addition to the difficult situation that the country going on since more than 7 years which effected in the education process at all levels especially at the academic level, occurrence of COVID-19 pandemic in the country at the beginning of 2020 and continuing this pandemic up to date, as it caused the suspension of education process especially in hospitals, and this reflects negatively on educational and skills achievement.

Desiring to contribute in providing a clear picture about the satisfaction of the students on their abilities and skills before graduation and make good understanding on the main weakness in their skills and abilities to be avoided in the future. The result of this study can help in improving the educational process in the university, so this study was designed to study the views of final- year students at the Faculty of Human Medicine at EIU University, which aims to find out the extent of their self-awareness of possessing the necessary competencies, the degree of their confidence in their abilities to conduct the basic clinical skills that have been acquired, the extent of their satisfaction with them, and their willingness to make up for the shortage in the internship period, make the best use of it and assume responsibility with confidence and abilities.

In our country many studies related to this subject were conducted most of them in the governmental universities, unfortunately most of them unpublished. This study considered to be one of the rare studies in private universities in Yemen.

1.3 Objectives:

The general objective aimed to measure the different views of the graduated medical students at Emirates International University (EIU) about clinical skills that acquired before graduation and their ability and willingness to start work as doctor.

Specific objectives;

- To determine the satisfaction level of medical students on their clinical skills that acquired before graduation
- To determine the readiness level of graduated students to start work as independent doctor
- To determine the main weakness on the students' clinical skills, and the causes of this weakness.

CHAPTER 2: LITERATURE REVIEW

2. LITERATURE REVIEW

2.1 What is a Clinical skill?

In the care of the patient, a practicing physician performs a purposely selected and integrated set of individually skillful acts that are pertinent to each patient encounter. These include, for example, engaging the patient in a professional relationship, taking a clinical history, performing a mental and physical examination, performing or initiating clinical tests or procedures, and undertaking diagnostic and therapeutic interventions. From an analytic perspective, these component acts of medical care reflect the generic competencies which comprise the practitioner's basic clinical method. Within each of these general competency categories, there exist a wide variety of more specific and individual clinical skills such as engaging the reticent patient, taking a sexual history, examining a specific body part, ordering a selected clinical test, or initiating care for an acutely ill patient with a defined clinical problem.

Thus, a single clinical skills as any discrete act within an overall process of patient care. Clinical skills are the foundation elements of the clinical method competencies upon which clinical practice is founded. Although the complexion of a set of skills utilized may vary with the patient or the kind of clinical problem encountered, or with the specialty emphasis of the practicing physician.

Because skill learning requires the demonstration of skill proficiency, the performance of a clinical skill must be observable. For the purpose of medical education, the taskforce defines a clinical skill as any discrete and observable act of clinical care. Skill competency cannot be established through unobserved examination alone. Observation is necessary to evaluate performance. Moreover, learners need repeated and constructive feedback in order to continually refine and improve clinical skill performance. Thus, the evaluation of skill proficiency required observer, such as a supervising physician or an experienced patient. Ultimately, the achievement of excellence in clinical practice results from continually improving one's clinical method competency. This in turn results from the repeated opportunity to perform and practice basic clinical skills.

Because medical undergraduate clinical skill education has traditionally been an implicit process, few medical schools in the United states have an explicit and comprehensive plan that describes the clinical skills education activities expected of faculty and students.[9]

2.1.1 Clinical Skill Education Principles:

Skill education principles are necessary in order that the teacher, leaner and institution share a common understanding about the skill education process. Without this shared understanding, professional skills education may remain misunderstood, undirected and not fully accepted within the clinical environment. The task force recommends that skills education be guided by the following principles:

1- Skill learning is a professional habit that must be nurtured in each student throughout her or his general professional education. Developing competency in a set of specified skills is important.
2- Clinical skills education is fundamentally developmental in nature. The opportunity for a continuous and graduated set of skill learning opportunities should exist over the four-year undergraduate curriculum.
3- Teaching and assessment are interdependent in optimizing the effectiveness of a curricular process.
4- Faculty have the primary role of ensuring the clinical skills education of students. They are also responsible for ensuring the quality of resident teaching of clinical skills to students.

Each student has the responsibility for achieving his or her own individual clinical skill competency. The habit of skill learning is essentially a self-directed professional process. [9]

2.2 Skill Learning objectives:

1- The ability to demonstrate professional behavior in the act of medical care.
2- The ability to engage and communicate with a patient and to build a physician-patient relationship for the purposes of information gathering, guidance, education and support.

3- The ability to apply scientific knowledge and method to clinical problem solving.
4- The ability to take a clinical history, perform a mental and physical examination and perform basic clinical procedures.
5- The ability to select, justify, and interpret clinical tests and imaging.
6- The ability to record, present, research, critique and manage clinical information.
7- The ability to diagnose clinical problems including differential diagnosis, clinical reasoning and problem identification.
8- The ability to formulate a prognosis about the future events of an individual's health and illness based upon an understanding of the patient, the general natural history of disease, and upon known intervention alternatives.

The ability to provide clinical care within the practical context of the individual patient-physician relationship. [9]

2.3 Specific Clinical Skills:

1- Communication skills:

This includes essential clinical interactions such as patient engagement and relationship building, general interviewing skills, clinical history-taking, counseling, teaching and reflection with patients and the recognition of common barriers to successful doctor- patient relationships. [9]

2- Cardiopulmonary Resuscitation (CPR):

Is a vital and essential skill that can save someone's life. The two key elements of CPR is pressing on the chest, also called compressions, and providing breaths.

CPR is comprised of chest compressions, airway management and rescue breathing. To deliver high-quality CPR, you must begin high-quality chest compression quickly, as these are considered the most important factor in giving the person a chance to recover. High- quality chest compressions are delivered at a rate between 100 to 120 beats per minute and at a depth between 2 to 2.4 inches (5 to 6 cm). [10]

3- Estimation level of consciousness (GCS):

A reduction in conscious level should prompt an urgent assessment of the patient, a search for likely cause and an evaluation of the risk of airway loss. The GCS was developed to risk-stratify head injury, but it has become the most widely recognized

assessment tool for conscious level. While disorders that affect language or limb function (e.g. left hemisphere stroke) may reduce its usefulness, evaluation of the GCS usually provides helpful prognostic information, and serial recordings can plot improvement or deterioration.it is not possible to define a total score below which a patient is unlikely to be able to protect the airway (from aspiration or obstruction), but a motor score of less than 5 would suggest significant risk.

Table(1): Glasgow Coma Scale Assessment

Eye-opening (E)	
• Spontaneous	4
• To speech	3
• To pain	2
• Nil	1
Best motor response (M)	
• Obeys commands	6
• Localizes to painful stimulus	5
• Flexion to painful stimulus or withdraws Hand from pain	4
• Abnormal flexion (internal rotation of Shoulder, flexion of wrist)	3
• Extensor response (external rotation of Shoulder, extension of wrist)	2
• Nil	1
Verbal response (V)	
• Oriented	5
• Confused conversation	4
• Inappropriate words	3
• Incomprehensible sounds	2
• Nil	1
Coma score = E + M + V	
Always present GCS as breakdown, not a sum score (unless 3 or 15)	
• Minimum sum	3
• Maximum sum	15

4- Lumbar puncture (LP):

LP is the technique used to obtain both a CSF and an indirect measure of intracranial pressure. After local anaesthetic injection, a needle is inserted between lumbar spinous processes (usually between L3 and L4) through the dura and into the spinal canal. Intracranial pressure can be deduced (if patients are lying on their side) and CSF removed for analysis. CSF pressure measurement is important in the diagnosis and monitoring of idiopathic intracranial hypertension. In this condition, the LP itself is therapeutic.

CSF assessment is important in investigating infections (meningitis or encephalitis), subarachnoid haemorrhage and inflammatory conditions (multiple sclerosis, sarcoidosis and cerebral lupus). [11]

5- Ascetic fluid aspiration:

Is the technique used to obtain a sample of fluid for inspection and analysis from all patients with ascites (diagnostic ascetic tap or abdominal paracentesis). Use either iliac fossa at a point one-third of distance from the anterior superior iliac spine to the umbilicus, avoiding any previous surgical scars. Insert a needle using strict aseptic technique and aspirate up to 20 ml. [12]

6- ABCD evaluation and management:

It’s the initial evaluation of a trauma patient requires a systematic approach to identify life threatening and potentially life-threating injuries. This typically involves a brief "Primary Survey" to assess airway (A), breathing (B), circulation (C), and disability (D, neuro exam) of the patient, so that all potential injuries can be seen (ABCD mnemonic). Needed interventions should be immediately addressed as the examiner proceeds through ABCD.

- Airway : it considered intact if the patient is conscious and speaking in a normal tone of voice. And it considered unprotected and\or compromised if there is expanding hematoma or subcutaneous emphysema in the neck, or GCS < 8. So a definitive airway can be secured in intubation or cricothyroidotomy.

- Breathing : the presence of symmetrical breath sounds indicate satisfactory ventilation; an absence or decrease of breath sounds may indicate a pneumothorax and\ or hemothorax and necessitate chest tube placement.
- Circulation and shock : clinical signs of shock are seen only if >25% of blood volume has been lost and include low BP, tachycardia, low urinary output.
- Disability : neurologic evaluation (disability) is also an important component of the primary survey. Key points include assessing for the patient's ability to move all extremities, looking for gross defects and assess level of consciousness. [13]

7- Peripheral Intravenous Access:

IV access is a mainstay of modern medicine. IV cannulation is a procedure performed by a wide array of health care professionals, including physicians, a nurses, physician assistant, phlebotomists, and emergency medical technicians. IV access can usually be accomplished in less than 5 minutes. It is obtaining timely and adequate vascular access is a major priority during any resuscitation. Its indicated for patients who need for venous blood sampling, intravenous fluid infusion, intravenous medication infusion, blood transfusion, and intravenous contrast infusion.

8- Nasogastric tube insertion:

Is commonly used to evaluate or treat bowel obstruction, ileus, or gastric hemorrhage, preoperatively or postoperatively, or to administer food or medication into the gastrointestinal tract. And the major indication for NG tube placement and suction is to aspirate the stomach content in patient with gastric bleeding. [14]

2.4 Related studies :

In University of Cincinnati (UCCOM) study conducted in 2003 to 2005, and the results showed that, four hundred sixty-seven of 601 possible survey (across both years and both rotations) were completed (78% response rate). During both rotations, relatively few students performed the procedure, ranging from 9% for Foley catheter insertion (24/208) to 50% for both ABG and NG tube insertion (130/259).

The two procedures most often performed were ABG (range 46%-50%) and NG tube insertion (range 42-50%). Feeling of competency varied from 12% (LP) to 82% (Foley catheter). Except for LP, if students performed a procedure at least once, they reported feeling more competent (range 85% for ABG to 96% for Foley catheter insertion). Among students who performed LP during a rotation, many still did not feel competent performing LPs: 23 (74%) in rotation 1 and 20 (40%) in rotation 2.

This study concluded that, many fourth-year students at UCCOM do not perform basic procedures during their acting internship rotations. Procedural performance correlate with feelings of competency. Lumber puncture competency may be too ambitious a goal for medical students. [15]

In Finland study conducted in 2006, and the results showed there were significant differences in theoretical knowledge and practical performance of procedures between students in different medical schools. The students in the university having integrated curriculum and longest experience of a clinical skills center were most satisfied with the volume and quality of emergency procedural skills teaching. They also found practicing in a skills lab more useful than students in other medical school. Over 50% of the students had performed IV Cannulation in adult, arterial blood sampling,

ventilation by mask and endotracheal intubation of an adult. Less than half of the students had practical experience of pediatric emergency procedures.

This study concluded that, the students' experience of emergency procedure has slightly improved. Early practicing in a clinical skills center seems to increase the student satisfaction with emergency skills education. [16]

In China study conducted in 2008, and the results showed that, many students reported never having been observed by a faculty member while they performed history taking/ communication (46% to 84%), physical examination (36% to 42%), or procedural tasks (41% to 81%). it was found that residents had observed the students more frequently than the faculty members. The correlations between self-confidence and the corresponded direct observation were small to medium but significant. However, no difference was found between observation by a faculty member and by a resident. The high confidence was reported on history taking and low confidence level was reported on LP doing (2.3%).

This study concluded confirmed that many medical students have not been directly observed in clinical training; and that those who were observed more often, expressed more self-reported confidence. Some assessment measures, which focus on direct observation and feedback during student-patient encounters, may improve the students' confidence. [17]

In Britain study conducted in 2000, and a survey found that 42% of newly qualified UK doctors felt their medical training had not prepared them well for starting work. Another survey conducted in May 2005, and the results showed 15% of the respondents felt poorly prepared by medical school for starting work. There were no association between gender or graduate entry status and preparedness.

This study concluded improvements in the preparedness of UK medical school graduates may be due to increased relevance of undergraduate teaching to life as a junior doctor and increased support in the workplace. [18]

In Kuwait study conducted in 2005, and the results showed that, the majority felt confident in performing routine skills (basic ECG and X-ray interpretations, insertion of intravenous line 71.4%, inserting urethral catheter 69.2% and nasogastric feeding 63.7%). Approximately two thirds had performed generic skills related to emergency resuscitation, with a half of them confident in performing them in the future (46.2%). Considerably lower percentage of the trainees were confident in performing lumbar puncture (25.3%). A third felt confident in performing artificial ventilation and endotracheal intubation. In the field of obstetrics and gynecology, while approximately three quarters of the respondents reported confidence in performing skills such as repair episiotomy (85.6%) and conducting normal deliveries (70.4%). The reported confidence showed no significant gender variation. Approximately a fifth was confident in performing lumbar puncture, needle aspiration of joints, insertion of thoracic drainage, insertion of central venous catheter, venous cut-down and indirect laryngoscopy. A small proportion reported confidence in performing different clinical procedures although they had not undertaken them during training.

This study concluded that, substantial proportions of trainees lacked confidence in performing emergency resuscitative measures and interns who are not competent identified early for taking remedial. [19]

In Iran study conducted in 2009, the results showed that, in spite of the fact the students found such procedures as chest tube insertion, IV cannulation, splinting, joint aspiration, cardiopulmonary cerebral resuscitation, pleural and peritoneal fluid aspiration, pelvic examination, pap smear, phlebotomy, urinary catheterization and supra pubic aspiration very important, they told they had not been well prepared to do them. Procedural skills that at least 50% of the respondents performed less than 2 times were: chest tube insertion, IV cannulation, splinting, joint aspiration, pleural and peritoneal fluid aspiration, pelvic examination, pap smear, cardiopulmonary cerebral resuscitation and supra pubic aspiration.

This study concluded that, the training in procedural skills needs to be given more attention and improved in the medical curriculum. [20]

In UK (University of Edinburgh) study conducted in 2007 to 2009, and the results showed that, the graduates consistently felt well prepared in consultation and communication skills but less prepared in acute care and prescribing. Educational supervisors consistently felt that graduates were well prepared in information technology and communication skills but less prepared in acute care and practical procedures. Free text analysis identified four main theme: knowledge; skills; personal attributes; and familiarity with ward environment.

This study concluded that, preparedness for practice data can be enriched by repeated collection over several years, comparison of different perspective, and incorporation of free text responses. The non-technology skills of decision-making, initiative, prioritization, and coping with stress are important components of preparing new doctors for practice. Education for foundation trainees should focus on the areas in which graduates are perceived to be less prepared, such as acute care, prescribing, and procedural skills. [21]

Another research also **In Kuwait** which was conducted in 2011, and the results showed that, of the 122 students invited to participate in the study, only 15 (12.3%) declined to comply. Most of students were aged 23 years or more (59.8%) and only 17 students were married (15.9%), over 50% of the students were female. Regarding the year of study,65 (60.7%) students were sixth year medical students, while 42 (39.3%) fifth year medical students. Most students reported high confidence level (>75%)in performing 7 of the 13 history taking / physical examination skills, and 2 of the 39 diagnostic/ treatment procedure skills. The highest confidence level was in performing abdominal examination (78.5%), while the lowest level was in care of Jackson-Pratt drain site and emptying the drain bulb. The total confidence score was significantly higher among male (p=0.021), and students with higher monthly income (p=0.002).

This study concluded that, medical students appeared to have poor self-confidence in performing clinical skills/ procedures. Curriculum planners should explore potential reasons, and methods for the improvement of confidence level among medical

students in performing skills/ procedures they were excepted to learn during their surgical rotation. [22]

In Syria (Damascus University) study conducted in 2012, and the results showed that, a total of 271 from 290 final-year medical student regarding the confidence of performing some core clinical skills responded (response rate 93.4%) " student response differed". While the confidence was highest for skills that do not required practice in the clinical skills laboratory, it was low for skills that need training in emergency and intensive care unit, or when students were participating in patient care with partial responsibility. 30.6% of the students were strongly disagree about their acquired skills and knowledge and about half of the students (50.2%) are not ready to start work as doctor after graduation. High confidence level was reported by students in performing NGT insertion (87.8%) and Foley's catheter insertion (85.2%). The low confidence level was reported in emergency skills and the percentage of students who can do estimation degree of consciousness (GCS) was (14.8%), estimation degree of dehydration in children (7.7%) and cardiopulmonary resuscitation (2.6%). In versus the students who just saw these skills was 96.8%, 58.6%, 85.6% respectively.

This study concluded that, confirm the need for effective clinical laboratory training, student participation in emergency room shifts, and the students to be allowed to take some degree of responsibility. [3]

In Malaysia (Widad University) study conducted in 2019, and the results showed that, the response rate was 92%. Out of 43 items, graduates were always competent in taking clinical history and examining a patient thoroughly; frequently competent in eight attributes; sometimes competent in 29; and occasionally competent in four. The graduates have not yet started their houseman- training; and thus, got fewer chance to practice all the procedures. It is expected that graduates' competency will improve during their houseman training. There is scope for improvement, as faculty need to pay more attention to improving student competency by arranging additional training. The teaching of clinical competency also needs integration with pre-clinical phase for early exposure. The findings have direct implications for faculty development toward

competency-based education that would bridge the gap between education and practice. This study offers other medical schools a window towards comprehensive use of competency tools to assess the competency of their graduates.

The respondents 70% were female and 30% were male, while 74% were unmarried and 26% were married. Among 43 items of clinical competency the highest score of 5 was obtained in taking clinical history thoughtfully; and examining a patient thoroughly. The items where respondents rated competency score of 4, including selecting relevant investigation, interpreting chest x-ray, IV cannulation, administrating IV infusion\drugs and wound dressing. The median competency level of the graduates in normal delivery were scored 3.5, the lowest score were obtained in LP. The comparison of competency scores between two groups based on gender, there were no significant difference between male and female. [23]

In Iraq the study conducted in the college of medicine at the University of Diyala, a rapid survey was done to know the reason behind the poor performance of the graduate by asking the professors and students one question (in your opinion, which of the three is the worst in the educational process in the college): the teacher, the students, or the curriculum? And the results were as follow: the group of professors, 63% of them saw that the students is the worst in the educational process, while 15% said that the teacher is the worst, and 22% said the curriculum is the worst. The group of students, 63% of them mentioned the professor is the worst in educational process, while 11% saw the student himself is the worst, and 26% said the curriculum is the worst. [24]

In Sana'a University study conducted in 2018-2019, and the results showed that, 69.4% of students are unsatisfied about skills at the time of internship and 54.4% are unable to start work as doctor in the community after graduation. The result show that basic clinical skills as history taking and general examination is the best in the student performance whereas procedures and emergency skills the performance of students was poor in doing if followed skills related to women, and 51.4% of students think that the role of department of general surgery in acquiring students necessary clinical

skills was poor as well as 57.2% see the role of department of obstetrics and gynecology poor and department of community medicine was poor at ratio 50% whereas internal medicine was the best in acquiring clinical skills to the students at ratio 89.6% followed by pediatric department at ratio 76.9%.

This study concluded that, more than half of the study sample are dissatisfies with the skills they have acquired. This explains why more than half are not ready to start as doctors in the future and that the greatest deficiencies of the graduate students are in the performance of procedural and emergency skills and skills for women and childbirth while their performance was good in clinical skills. In addition to the training place, the department and the curriculum have a role in the weakness of the skills and experience and the readiness of the student to start the work of the revolution hospital and the department of Internal Medicine followed by the pediatric department are the best in providing and teaching the student the skills and experience necessary to work as doctor in the future. [25]

Another research in **Sana'a University** which conducted in 2020-2021, and the results showed that, among 327 medical students under study, male slightly more (54.7%) than female and the majority 88.1% of students in age category more than 24 years with age mean of 26 +or- 1.49 years and the majority of participants 71.3% were single. Regarding satisfaction with the acquired medical skills, experience and knowledge in the collage during study years, most of participant not satisfied 63% as they mentioned that the skills they acquired in the collage during study years were not satisfied, while 37% of students were satisfied about the skills they acquired at the time of study. In addition to that more than half of students 59.3% showed that they are not ready to start working as a doctor after graduate. Regarding the reasons concerned with the weakness status of skills and experience of graduates, 40.4% of students mentioned curriculum, while 28.4% carried responsibility the professors and 24.5% said the difficult conditions of the country and 6.7% requester. Out of all medical students under study, only 16.8%appeared satisfaction toward the procedural and emergency skills that had learned during the training period.

This study concluded that, more than half of the students were not satisfied with the skills they acquired during the training period, and this played a major role in their unwillingness to start work and take responsibility as independent doctor. Lack of sufficient skills and experience are result of, the current curriculum, weakness of the educational process, the teaching staff, and the difficult situation of the country. The most skills that students can perform well are the basic clinical skills but more than two-third of students cannot perform many procedural and emergency skills. [26]

CHAPTER 3: Methodology

3. Methodology

3.1 Study design

Cross- sectional study was conducted on fifth year medical students, graduators and house officers in faculty of human medicine at Emirates International University.

3.2 Time of study:

The data collection was conducted in the period between January 2022 to February 2022.

3.3 Study area & population:

The study was conducted among students in the (fifth year medical students, graduators and house officers).

3.4 Study variables:

- Socio-demographic variables included the following:
  - Gender
  - Age
  - Education level
- Experience variables
- knowledge variables
- Reasons variables
- Procedural and emergency skills variables
- Performance of clinical and Para-clinical skills variables
- Performance of the medical skills in (Pediatric, obstetric & gynecology) variables.

3.5 Inclusion & Exclusion criteria of participants:

3.5.1 Inclusion criteria:

All medical students in the fifth year medical students, graduators and house officers were agree to participate in this study.

3.5.2 Exclusion criteria:

All Medical students at levels less than fifth year.

3.6 Sample size:

All medical students at these levels and their number was about 183.

3.7 Data collection method:

Data were collected through self .administrated paper questionnaire containing 67 items that was handed out to183 student.

The questionnaire formatted from previous literatures of the same topic and with assistant of the supervisor and our opinions as students.

The questionnaire consists of **6 parts**

Part1:

Personal data (name, age, gender, marital status and education level).

Part 2:

General survey (15 question) :

Satisfaction of medical(Knowledge, experience and skills)

period importance of internship and readiness to work as a doctor.

Performance of internal medicine and surgical departments.

Part3:

Self-assessment of procedural and emergency skills (21 skill)

Part4:

Self-assessment of basic clinical skills (12skill)

Part5:

Self-assessment of skills related to obstetric & Gynecology(6 skill)

Part6:

Self-assessment of skills related to pediatrics (8 skill)

3.8 Data analysis:

1-The data were entered to Microsoft excel sheet and were analyzed by statically package for social science(SPSS)

2-Data were presented in tables and graphs.

3.9 Ethical consideration:

The study of research was conducted after approval of research committee permission obtained from EIU.

Purpose of the studying and benefits were explained to participates. Furthermore, the participants were informed that they have the right to refuse or accept participation.

All the information were kept strictly confidential.

CHAPTER 4:
Results

4. Results:

A total of 183 medical students of Final Years included in this study. The study was conducted in Faculty of Medicine - Emirate international University, about the acquired clinical skills before graduation and readiness to start work among final year-medical students in2022. The researchers found the following findings:

Demographic characteristics of participants:

i. Distribution of the sample by age:

Out of 183 participated medical students, the majority 78.7% of students were in age category 25-29 years followed by age group 20-24 years 20.2%, while the lowest age group 1.1% were within age group 30-34 years. The mean of the age was 25.7 ±1.6 year,

Table (2): Distribution the sample under study by age

Item	Frequency	Percent
20- 24 y	37	20.2
25-29 y	144	78.7
30-34 y	2	1.1
Total	183	100
Age mean +SD	25.7 ±1.6 year	

ii. Distribution of the participants by sex:

Regarding to the gender of the participants under study the result showed that, there was no difference between participants regarding their gender, where females were nearly equal to males.

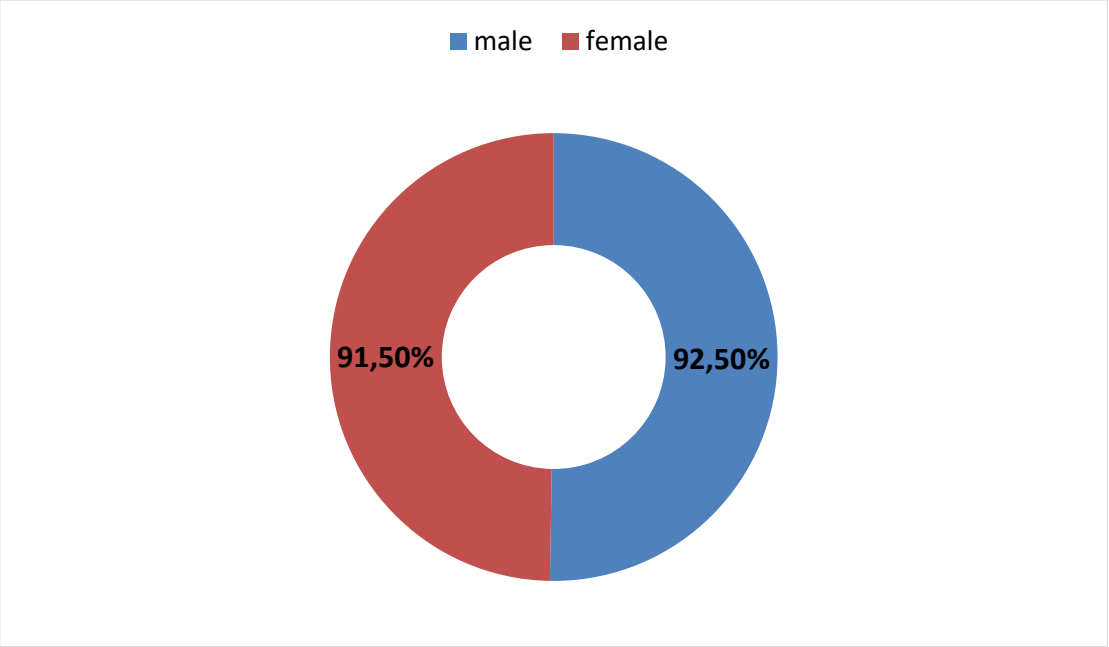
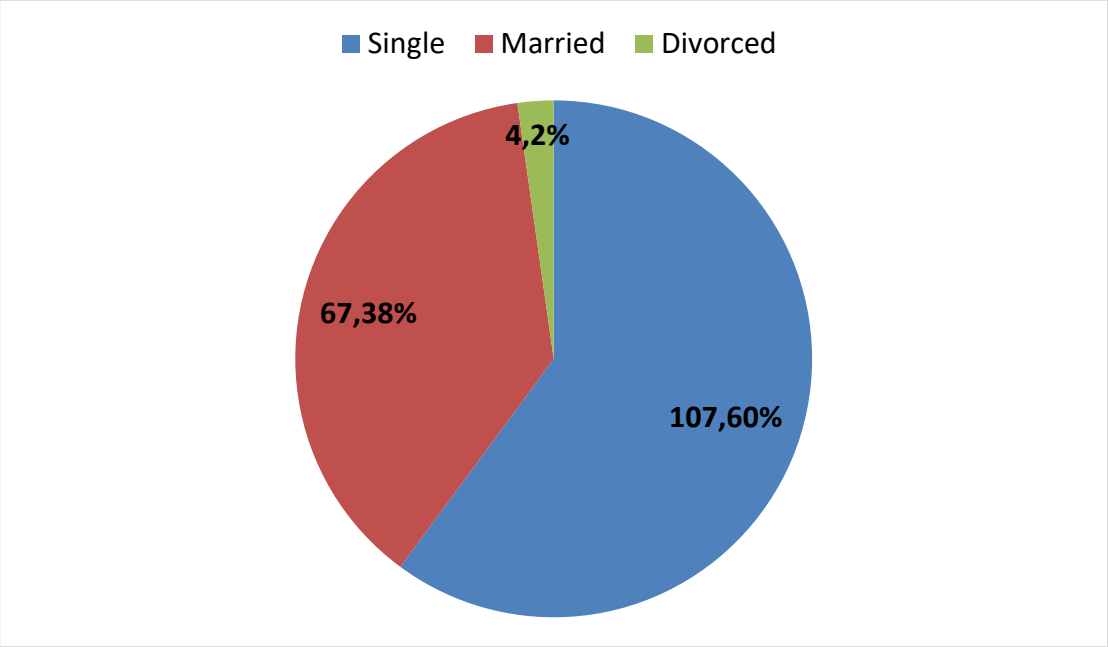


Figure (1) :Distribution of sample by sex

iii. Distribution of the participants by the martial status

Depending on the martial status of the participants under study the result showed that, most of participants 60.1% were single and more than third 37.6% were married, while those who are divorced were only 2.2%



Figure(2): Distribution of the participants by the marital status

iv. Distribution of the participants by study level

Regarding to the study level of the participants under study the result showed that, around 40% of participants were in fifth year and 38.2% were in internship, while one-fifth were in sixth year.

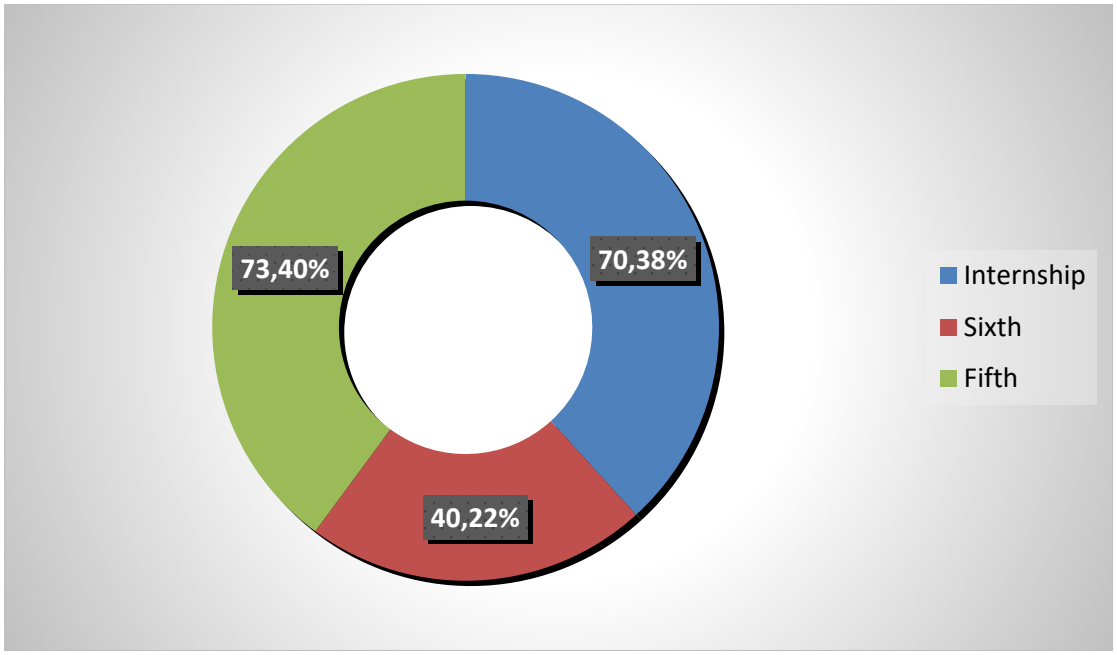


Figure (3) : Distribution of the participants by the study level

Satisfaction of the participants on the gained medical (skills, experience and knowledge)

Regarding to the satisfaction of the participants on the gained medical (skills, experience and knowledge) the result showed that,

Almost of students 73.2% were totally satisfied or satisfied on the amount and the quality of acquired medical skills, while 24% were not satisfied and only 2.7% were totally not satisfied.

Regarding to the acquired medical experience, more than two third of students 70.5% were totally satisfied or satisfied on the amount and the quality of acquired medical experience, while 29% were not satisfied and only 0.5% were totally not satisfied.

Regarding to the acquired medical knowledge, almost of students 86.8% were totally satisfied or satisfied on the amount and the quality of acquired medical knowledge, while only 13.2% were not satisfied

Table (3): Satisfaction degree about gained medical skills, experience and knowledge among participated students of Emirate International University, 2022

Satisfaction of gained medical skills		
level	**Frequency**	**Percent**
I totally agree	33	18
I agree	101	55.2
Disagree	44	24
Strongly Disagree	5	2.7
Total	183	100
Satisfaction of gained medical experience		
Level	**Frequency**	**Percent**
I totally agree	25	13.7
I agree	104	56.8
Disagree	53	29
Strongly disagree	1	0.5
Total	183	100
Satisfaction of gained medical knowledge		
Level	**Frequency**	**Percent**
I totally agree	31	17
I agree	127	69.8
Disagree	24	13.2
Strongly disagree	0	0
Total	182	100

Regarding to the readiness of students to start working as a doctor after graduate, the study found that most of students have readiness, where 51.6% and 20.9% reported agree and totally agree, respectively. On the other side, quarter of students are not ready to work, where 24.7% and 2.7% reported disagree and strongly disagree.

In regard to constrains and reasons that make graduate not ready to start working as a doctor in community after graduate, 53.4% of respondents were fear of making mistakes and taking responsibility, 28.4% do not have the necessary experience and skills and 9.5 % weak in making the decision to diagnose the condition and start treating it.

Table (4): Readiness to start working as a doctor in the community among participated students of Emirate International University, 2022

Readiness to start working as a doctor in the community		
	Frequency	Percent
I totally agree	38	20.9
I agree	94	51.6
Disagree	45	24.7
Strongly Disagree	5	2.7
Total	182	100
Reasons that make graduate not ready to start working as a doctor		
I do not have the necessary experience and skills	42	28.4
Fear of making mistakes and taking responsibility	79	53.4
Weak in making the decision to diagnose the condition and start treating it	14	9.5
Subjective personal reasons	7	4.7
Others	6	4.1
Total	148	100

Regarding to the importance of internship period to complete learning skills and experience that lack in study collage, the great majority of respondents standing in the same way, 51.1% answered agree and 41.2% totally agree

Table(5): The internship period is important to learn skills and experience that lack

Level	**Frequency**	**Percent**
I totally agree	75	41.2
I agree	93	51.1
Disagree	11	6
Strongly Disagree	3	1.6
Total	182	100

The performance of the departments,

Department of Internal Medicine

The department got good and very good performance, respectively by most of students 63.2% and 14.3%, while got very weak performance by only 2.2% of responses. Among student whom gave weak and very weak evaluation, the most selected reasons were diversity of doctors school and their teaching methods 39% and clinical part defect 22% that leaded to negatively affect the acquisition of the skills and experience in internal medicine departments. Since insufficient period of training was the less frequency reason 4.9%

Table(6): Performance of the internal medicine departments in education and providing skills and experiences to qualify graduates to work as a doctor.

Level	**Frequency**	**Percent**
Very good	26	14.3
Good	115	63.2
Weak	37	20.3
Very weak	4	2.2
Total	182	100
Reasons that you suspected was negatively affect the acquisition of the skills and experience in internal medicine departments:		
Statement	Frequency	Percent
Insufficient period of training	2	4.9
There are no standardized clinical skills books	4	9.8
Diversity of doctors school and their teaching methods	16	39
Theoretical part defect	6	14.6
Clinical part defect	9	22
Overcrowding of students from other colleges with few patient	4	9.8
Total	41	100

Department of Surgery:

Most of students evaluated good 53.8% and very good 12.6% performance, while 29.1% of respondents evaluated weak performance and only 4.4% reported very weak.

Diversity of doctor's school and their teaching methods 37.1% and clinical part defect 32.3% were the most reasons that caused negatively affect the acquisition of the skills and experience in surgical departments among the students whom responded that bad performance for this department among different hospitals

Table (7) : Performance of the surgical departments in education and providing skills and experiences to qualify graduates to work as a doctor

Level	**Frequency**	**Percent**
Very good	23	12.6
Good	98	53.8
Weak	53	29.1
Very weak	8	4.4
Total	182	100
Reasons that you suspected was negatively affect the acquisition of the skills and experience in surgical departments:		
Statement	Frequency	Percent
Insufficient period of training	5	8.1
There are no standardized clinical skills books	2	3.2
Diversity of doctors school and their teaching methods	23	37.1
Theoretical part defect	3	4.8
Clinical part defect	20	32.3
Overcrowding of students from other colleges with few patient	9	14.5
Total	62	100

Department of Obstetrics and Gynecology

Most of responses 51.6% and 10.5% evaluated as good and very good respectively, while more than third of responders reported weak 29.1% and very weak performance 8.8%.

About the reasons for negatively affect the acquisition of the skills and experience in obstetric and gynecological departments among negative responders reported that, clinical part defect 45.6% and diversity of doctor's school and their teaching methods 26.5%. On the other hand, overcrowding of students from other colleges with few patient was the less reason selected.

Table(8): Performance of the obstetric and gynecological departments in education and providing skills and experiences to qualify graduates to work as a doctor

Level	**Frequency**	**Percent**
Very good	19	10.4
Good	94	51.6
Weak	53	29.1
Very weak	16	8.8
Total	182	100
Reasons that you suspected was negatively affect the acquisition of the skills and experience in obstetric and gynecological departments:		
Statement	**Frequency**	**Percent**
Insufficient period of training	9	13.2
There are no standardized clinical skills books	5	7.4
Diversity of doctors school and their teaching methods	18	26.5
Theoretical part defect	3	4.4
Clinical part defect	31	45.6
Overcrowding of students from other colleges with few patient	2	2.9
Total	68	100

Department of Pediatric

Most of students 50.3% and 16.9% respectively gave good and very good performance for Department of Pediatric, On the other side, 27.3% and 5.5% reported weak and very weak performance respectively. The most reasons identified that caused negatively affect the acquisition of the skills and experience in pediatric departments were diversity of doctors school and their teaching methods and clinical part defect that reported 30.5% for each one, among respondents with bad evaluation for these departments among hospitals.

Table(9): Performance of the pediatric departments in education and providing skills and experiences to qualify graduates to work as a doctor

Level	**Frequency**	**Percent**
Very good	31	16.9
Good	92	50.3
Weak	50	27.3
Very weak	10	5.5
Total	183	100
Reasons that you suspected was negatively affect the acquisition of the skills and experience in pediatric departments:		
Statement	**Frequency**	**Percent**
Insufficient period of training	13	22
There are no standardized clinical skills books	2	3.4
Diversity of doctors school and their teaching methods	18	30.5
Theoretical part defect	4	6.8
Clinical part defect	18	30.5
Overcrowding of students from other colleges with few patient	4	6.8
Total	59	100

Performance of procedural and emergency skills:

According to students self-assessment of procedural and emergency skills that have learned during the years of training, the majority of students 82%, 75% and 77.6% reported they can do with confidence I.M and I.V injection, S.C and intradermal injection and cannula insertion and fluid infusion respectively. On the other hand, 10.9%, 10% and 13.7% respectively reported they participated in performing of I.M and I.V injection, S.C and intradermal injection and cannula insertion and fluid infusion but can't do it alone, while respectively 4.9%, 10.6% and 6.6% of students reported they watched the performing of these skills and can't do it on my own.

Table(10): self-assessment of procedural and emergency skills in light of what you have learned during the years of training

Statement	**I.M and I.V injection**		**S.C and intradermal injection**		**Cannula insertion and fluid infusion**	
	Freq	%	Freq	%	Freq	%
I can do the skill with confidence	150	82	135	75	142	77.6
I participated in performing of the skill but I can't do it alone	20	10.9	18	10	25	13.7
I watched the performing of skill and I can't do it on my own	9	4.9	19	10.6	12	6.6
I haven't seen the skill perform and can't do it	4	2.2	8	4.4	4	2.2

Regarding ability to perform with confidence blood transfusion and monitoring, nasogastric tube insertion and Foley catheter insertion were only 32.2%, 26% and 23.8 % respectively. While the students whom haven't seen the performance of these skills and can't do it were 18%, 37% and 20.8% respectively.

Table (11) :self-assessment of procedural and emergency skills in light of what you have learned during the years of training

skill performing level	**Blood transfusion and monitoring**		**Nasogastric tube insertion**		**Foley catheter insertion**	
	Freq	%	Freq	%	Freq	%
I can do the skill with confidence	59	32.2	47	26	60	32.8
I participated in performing the skill but I can't do it alone	36	19.7	32	17.7	25	13.7
I watched the skill perform and I can't do it on my own	55	30.1	65	35.9	60	32.8
I haven't seen the skill perform and can't do it	33	18	37	20.4	38	20.8

Of all participant, most of students 60.8% and 51.9% can do with confidence administration of oxygen therapy and bag & mask ventilation respectively, while 13.3% and 14.2% reported haven't seen the performance of these skills and can't do it.

Table(12): self-assessment of procedural and emergency skills in light of what you have learned during the years of training

skill performing level	**Administration of oxygen therapy**		**Bag and mask ventilation**	
	Freq	%	Freq	%
I can do the skill with confidence	110	60.8	95	51.9
I participated in performing the skill but I can't do it alone	21	11.6	28	15.3
I watched the skill perform and I can't do it on my own	26	14.4	34	18.6
I haven't seen the skill perform and can't do it	24	13.3	26	14.2

Among all responders, only 34.4%, 54.9% and 58.5% reported they can do with confidence the cardiopulmonary resuscitation, ABCD evaluation and management and estimation of degree of consciousness, respectively.

Table(13): self-assessment of procedural and emergency skills in light of what you have learned during the years of training

skill performing level	**Cardiopulmonary resuscitation**		**ABCD evaluation and management**		**Estimation of degree of consciousness**	
	Freq	%	Freq	%	Freq	%
I can do the skill with confidence	63	34.4	100	54.9	107	58.5
I participated in performing the skill but I can't do it alone	44	24	41	22.5	36	19.7
I watched the skill perform and I can't do it on my own	31	16.9	12	6.6	16	8.7
I haven't seen the skill perform and can't do it	45	24.6	29	15.9	24	13.1

Of all participated students, few only 26.8%, 24.2% , 14.8 % and 7.75 reported they can do with confidence wound care and suturing, abscess drainage, ascites fluid aspiration and lumbar puncture respectively, while high proportions of students 33.3%, 31.9% , 41.5% and 57.4% reported watched the skill performing and can't do it on my own.

Table(14): self-assessment of procedural and emergency skills in light of what you have learned during the years of training

Skill Performing level	**Wound care and suturing**		**Abscess drainage**		**Ascites fluid aspiration**		**Lumbar puncture**	
	Freq	%	Freq	%	Freq	%	Freq	%
I can do the skill with confidence	49	26.8	44	24.2	27	14.8	14	7.7
I participated in performing the skill but I can't do it alone	49	26.8	33	18.1	34	18.6	38	20.8
I watched the skill perform and I can't do it on my own	61	33.3	58	31.9	76	41.5	105	57.4
I haven't seen the skill perform and can't do it	24	13.1	47	25.8	46	25.1	26	14.2

Regarding the ability for dealing with case of acute abdomen, dealing with case of trauma and **dealing with case of shock** respectively among all participants, 45.3%, 28.4% and 31.1% answered can do the skill with confidence.

Table(15): self-assessment of procedural and emergency skills in light of what you have learned during the years of training

skill performing level	**Dealing with case of acute abdomen**		**Dealing with case of trauma**		**Dealing with case of shock**	
	Freq	%	Freq	%	Freq	%
I can do the skill with confidence	82	45.3	52	28.4	57	31.1
I participated in performing the skill but I can't do it alone	44	24.3	60	32.8	54	29.5
I watched the skill perform and I can't do it on my own	17	9.4	39	21.3	30	16.4
I haven't seen the skill perform and can't do it	38	21	32	17.5	42	23

Of all participant, about half of students 45.4%, 59% and 57.8% can do with confidence diagnosis of flail chest, Diagnosis of pneumothorax and Diagnosis of plural effusion, respectively.

Table(16): self-assessment of procedural and emergency skills in light of what you have learned during the years of training

skill performing level	**Diagnosis of flail chest**		**Diagnosis of pneumothorax**		**Diagnosis of plural effusion**	
	Freq	%	Freq	%	Freq	%
I can do the skill with confidence	83	45.4	108	59	104	57.8
I participated in performing the skill but I can't do it alone	23	12.6	34	18.6	37	20.6
I watched the skill perform and I can't do it on my own	26	14.2	23	12.6	22	12.2
I haven't seen the skill perform and can't do it	51	27.9	18	9.8	17	9.4

Overall performing of procedural and emergency skills:

Based on overall assessment of students for their procedural and emergency skills that have learned during the years of training we found among the 21 procedural and emergency skills, near half of final-years medical students 46.5% have the ability with confidence to do procedural and emergency skills while 17.3% of their colleagues participated in performing of the skills but can't do these skills without help. About fifth of graduates watched the performing of skill but can't perform them by their selves and the remaining 15.2% of participants haven't seen skill carry out and can't do them.

Table(17): Overall performing of procedural and emergency skills in light of what you have learned during the years of training

Statement	Frequency	%
I can do the skill with confidence	1188	46.5
I participated in performing of the skill but I can't do it alone	442	17.3
I watched the performing of skill and I can't do it on my own	534	20.9
I haven't seen the skill perform and can't do it	389	15.2
Total	2553	100.0

Performance of clinical and Para clinical skills:

Out of 183 medical students, the vast majority of students evaluated good and very good level for their performing taking the medical history, general examination, chest examination, cardiac examination and abdominal examination, while no or few gave poor or very poor or even cannot perform of these skills.

Regarding CNS examination skill, most of graduates 34.1% and 55.3% conferred very good and good performing levels to conduct skill respectively. Similarly, Surgical cases examination skill 39% and 45.1% and understanding lab investigation reports

44.8% and 40.3% got similar level of evaluation. However, less percent of participants reported in the negative side of evaluation for these skills.

Most of participated students reported have very good and good ability to perform the Chest and abdominal X ray interpretation skill of, 28% and 47.3% respectively. On the other side, less percent of participants 22% and 1.6% said poor and very poor performing for the previous skill respectively.

Contrary for the previous, half and above of participant appeared bad performance for ability to conduct ECG interpretation with 36.6% poor, 10.4% very poor and 2.7% cannot perform the skill. In the same context ,Brain CT scan interpretation presented similar results of evaluation levels.

In regard to writing prescription of drugs skill, only 22.2% of participants reported that have very good and 38.8% have good performance, while the remaining 26.8% have poor performance 8.7% very poor and 3.3% of participants cannot perform this skill.

Table(18): Performance of Clinical and para-clinical skills

Medical skills	Very good No. (%)	Good No. (%)	Poor No. (%)	Very poor No. (%)	Cannot perform the skill No. (%)
Taking the medical history	126 (68.9)	56 (30.6)	0	0	1 (0.5)
General examination	127 (69.4)	54(29.5)	1(0.5)	1(0.5)	0
Chest examination	111 (60.7)	68 (37.2)	4 (2.2)	0	0
Cardiac examination	92 (50.5)	77 (40.2)	13 (7.1)	0	0
Abdominal examination	124 (67.8)	57 (31.1)	2 (1.1)	0	0
CNS examination	61 (34.1)	99 (55.3)	17 (9.7)	2 (1.1)	0
Surgical cases examination	71 (39)	82 (45.1)	25 (13.7)	3 (1.6)	1 (0.5)
Chest and abdominal X ray interpretation	51 (28)	86 (47.3)	40 (22)	3 (1.6)	2 (1.1)
ECG interpretation	18 (9.8)	74 (40.4)	67 (36.6)	19 (10.4)	5 (2.7)
Brain CT scan interpretation	14 (7.8)	65 (36.1)	74 (41.1)	21 (11.7)	6 (3.3)
Understanding lab investigation reports	81 (44.8)	73 (40.3)	21 (11.6)	6 (3.3)	0
Writing prescription of drugs	41 (22.4)	71 (38.8)	49 (26.8)	16 (8.7)	6 (3.3)

Overall Performance of clinical and Para clinical skills

The overall performance among graduates regarding 12 skills of clinical and Para clinical skills the study showed, majority of students evaluated their selves with good ability to conduct clinical and Para clinical skills 41.9% very good and 39.4% good performance. On the other side, the findings found that 14.3% of participants with

poor performance and 3.3% with very poor performance toward clinical and Para clinical skills. Interestingly, 1% of last-years medical students reported cannot perform clinical and Para clinical skills.

Table(19): Overall Performance of Clinical and Paraclinical Skills

Performance level	Frequency	%
Very good	917	41.9
Good	862	39.4
Poor	313	14.3
Very poor	73	3.3
I cannot perform the skill	21	1.0
Total	2186	100.0

Performance of children, women and childbirth Skills:

Regarding neonatal examination skill, most of students have good ability to conduct this skill as 51.6% good performance. On the same context, around one-fifths of students with poor ability as poor performance, while only 1.1% reported cannot do the previous skill.

The majority of participants reported that have good ability to conduct estimation of degree of respiratory distress, estimation of degree of dehydration and child body measurements with very good and good performance. On the other side, only 13.2%, 11% and 15.5% reported poor performance for these skills, respectively.

Only half of participated students reported have good ability to perform growth chart interpretation with 17.8% very good and 34.3% good performance. Similarity, vaccine administration skill got similar levels of evaluation, while the other half of students reported bad ability in performing. About 0.6% and 7.7% of students cannot perform these skills, respectively.

Only third of participants mentioned that they have good ability to perform neonatal resuscitation, while the remaining were 48.9% bad, 9.1% very bad and 4.5% cannot perform this skill.

Majority of participated students reported have good ability to perform skills as following, 28.5% very good and 49.5% good performance for management of child dehydration.

Table(20): Performance of medical skills in pediatric

Medical skills	Very good No. (%)	Good No. (%)	Poor No. (%)	Very poor No. (%)	Cannot perform the skill No. (%)
Neonatal examination	0	94 (51.6)	43 (23.6)	3(1.6)	2(1.1)
Estimation of degree of respiratory distress	60 (33)	95 (52.2)	24 (13.2)	3(1.6)	0
Estimation of degree of dehydration	73 (40.3)	86(47.5)	20(11)	1(0.6)	1(0.6)
Child body measurements	61(33.7)	89(49.2)	28(15.5)	2(1.1)	1(0.6)
Growth chart interpretation	32(17.8)	62(34.4)	69(38.3)	8(4.4)	9(5)
Neonatal resuscitation	17(9.7)	49(27.8)	86(48.9)	16(9.1)	8(4.5)
Management of child dehydration	47(25.8)	90(49.5)	40(22)	4(2.2)	1(0.5)
Vaccine administration	36(19.8)	70(38.5)	49(26.9)	13(7.1)	14(7.7)

Regarding Pregnant women examination skill, majority of students have good ability to conduct this skill as36.5% very good and 47% good performance, whenever 13.3%, 2.2% and 1.1% of students reported poor, very poor and poor performance, cannot do the previous skill, respectively.

Low level of frequencies of good ability to deliver normal women vaginally, ability to use instrument that aid delivery, episiotomy doing, IUD insertion and removal and sub-dermal contraceptive implantation, while the high frequencies reported cannot perform these skills as 37%.38.7 %, 49.2 % . 44.8% and 42.5% respectively. In addition, 29.3%, 34.8%, 28.7% ,29.3% and 29.3% reported poor ability to conduct theses skills respectively.

Table(21): Performance of medical skills in Obstetric and Gynecology

Medical skills	Very good No. (%)	Good No. (%)	Poor No. (%)	Very poor No. (%)	Cannot perform the skill. No. (%)
Pregnant women examination	66(36.5)	85(47)	24(13.3)	4(2.2)	2(1.1)
Ability to deliver normal women vaginally	6(3.3)	40(22.1)	53(29.3)	15(8.3)	67(37)
Ability to use instrument that aid delivery	8(4.4)	20(11)	63(34.8)	20(11)	70(38.7)
Episiotomy doing	5(2.8)	15(8.3)	52(28.7)	20(11)	89(49.2)
IUD insertion and removal	5(2.8)	19(10.5)	53(29.3)	23(12.7)	81(44.8)
Sub-dermal contraceptive implantation	5(2.8)	20(11)	53(29.3)	26(14.4)	77(42.5)

Reasons that negatively affect the acquisition of the skills and experience necessary to qualify doctor

Regarding the first responsible concerned with the weakness status of skills and experience of graduates. the medical students pointed out that 44.3% for delayed payment of financial dues of doctors in the hospital,37.2% for diversity of coaches

and their teaching method and 30.1% for Student neglect and absenteeism. While 27.3% and 25.1% respectively, carried the responsibility to Insufficient period of training. and non-available of standardized clinical skills books.

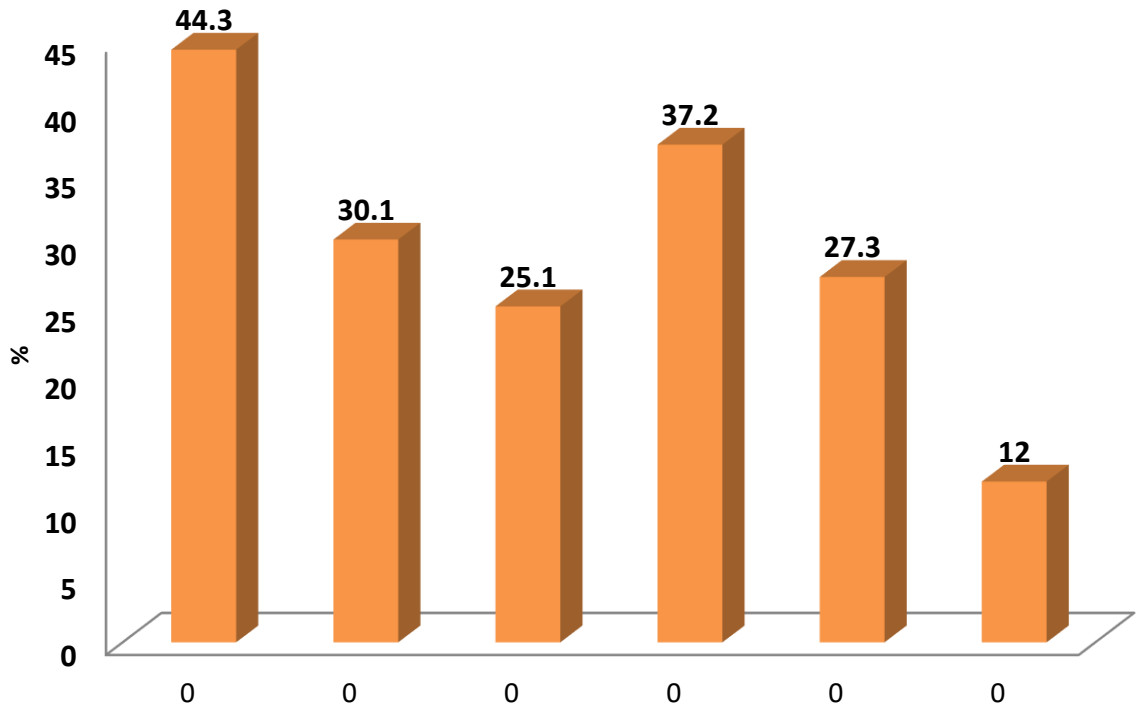


Figure (4) : Reasons that negatively affect the acquisition of the skills and experience necessary to qualify you as a doctor

Chapter 5 : Discussion

5. Discussion

This chapter discuss in detail the major finding and the implication of them, The result put in context of the previous and recent research in form of comparing our finding with other researches finding (where applicable) and comparing our finding based on the background variables. The main topics are : Characteristics of sample under study, satisfaction of the participants on the gained medical (skills, experience and knowledge), the readiness to start working as a doctor after graduate, the performance of the departments, Performance of procedural and emergency skills, performance of clinical and Para clinical skills, Performance of children, women and childbirth skills and reasons that negatively affect the acquisition of the skills and experience necessary to qualify doctor.

Characteristics of sample under study

The current study was conducted among the final years' medical students in Emirate International University. Total of 183 students from three levels (fifth, sixth and internship) were included in the study.

Regarding to the gender of the participants the result of this study showed that there was no difference in the number of the students in two sexes. This result is similar to other researchers finding that showed approximately the same number of the two sex groups, study was conducted in Sana'a University in 2021 the result of this study showed that males were slightly more (54.7%) than female. [26] Another study was conducted in Kuwait in 2011 showed over 50% of the students were female.[22] In the other side, some studies showed big difference within the two sex groups, study was conducted in Malaysia 2019 showed that 70% of medical students were female and 30% of them were male.[23]

Regarding to the age of the participants the result showed that, most of the participants (78.7%) were in the age group 25-30 years, around 20% were under 25 years and only 1% were above 30years. And the mean age of the participants was 25.7 ±1.6 year. The current study result is coherent with other researchers' findings that showed the nearly the same mean of the age, study was conducted in Sana'a University 2021 showed

that the majority of students (88.1%) in age category more than 24 years with age mean of 26 ± 1.49 years.[26] Study that conducted in Kuwait 2011 showed most of the students were aged 23 years or more (59.8%).[22]

Depending on the study level of the participants the current study was conducted among students of three levels, those who are already finished the fifth level, those who are already finished the sixth level and those who are in the internship. The current study was similar to other studies that conducted among students from more than one level. Study that conducted in Kuwait 2011 showed that (60.7%) students were sixth year medical student, while (39.3%) fifth year medical students.[22]

In the other hand this study was not incoherent with other studies which conducted among students from one level. Study was conducted in Syria (Damascus University) in 2012 this study was conducted among the final year medical student only.[3]

Satisfaction of the participants on the gained medical (skills, experience and knowledge)

Regarding to the satisfaction of the participants on the gained medical (skills, experience and knowledge) the result showed that,

Regarding to the student's satisfaction on the amount and the quality of acquired medical skills, the current study results showed that around three quarters of participants 73.2% were satisfied on the amount and the quality of acquired medical skills, while more than one quarter of students 26.7 % were not satisfied.

Regarding to the acquired medical experience, more than two third of students 70.5% were satisfied on the amount and the quality of acquired medical experience, while 29.5% were not satisfied.

Regarding to the acquired medical knowledge, almost of students 86.8% were totally satisfied or satisfied on the amount and the quality of acquired medical knowledge, while only 13.2% were not satisfied.

This result is in agreement with study that conducted in Damascus University 2012, the result of this showed that only 30.6% of the students were strongly disagree about their acquired skills and knowledge.[3]

In the other hand, the Study that conducted in Sana'a University 2021, showed that most of participant not satisfied (63%), while 37% of students were satisfied about the skills they acquired at the time of study.[26]

Readiness to start working as a doctor after graduate

Regarding to the readiness of students to start working as a doctor after graduate, the study found that most of students 72.5% have readiness to start working as a doctor after graduate. On the other side, more than quarter 27.5% of students are not ready to start working as a doctor after graduate. This result not agreed with other studies that showed as far lower readiness among the participants to start working as a doctor after graduate, in Britain study which conducted in 2000 found that 42% of newly qualified UK doctors felt their medical training had not prepared them well for starting work. And another survey conducted in May 2005, and the result showed 15% or the respondents felt poorly prepared by medical school for starting work.[18]

Also in Damascus University 2012, the result showed that about half of students (50.2%) are not ready to start work as a doctor after graduation.[3]

Depending on reasons that make graduates not ready to start working as a doctor in community after graduate the result of this study showed that 53.4% of respondents were fear of making mistakes and taking responsibility, 28.4% do not have the necessary experience and skills and 9.5 % weak in making the decision to diagnose the condition and start treating it.

This result is not agreed with other studies which conducted in Sana'a University 2020-2021, which result showed that the main reasons for the inability to start working as independent doctors is the lack of sufficient experience and skills with 60.5%, followed by the fear of making mistakes and taking responsibility with 58.7%,

while 30% mentioned that the reason is due to weak decision-making, finally 11.6% of the respondents believe that personal and subjective reasons. [26]

Importance of internship period to complete learning skills and experience

Regarding to the importance of internship period to complete learning skills and experience that lack in study collage the result of this study showed that, almost of the respondents 92.3% agreed in the importance of internship period to complete learning skills and experience that lack in study collage. This result is in agreement with study conducted in Sana'a University 2020-2021, and the result showed that 95.1% of the respondents agreed in the importance of internship period to complete learning skills and experience.[26]

In Malaysia study which conducted in 2019, the result showed that the graduates have not yet started their houseman-training; and thus' got fewer chance to practice all the procedures. It is expected that graduates' competency will improve during their houseman training.[23]

Students' evolution for the performance of the departments

In this section, the performance of the medical departments will be discussed depending on the evaluation of the students under study

- The current study showed that, more than three quarters (77.5%) of the participants assessed the performance of internal medicine department as good to very-good, while 22.5% of the participants assessed the performance of medical department as weak to very-weak. Among those who assessed the performance of this department as weak to very-weak more than three quarters of them returned the weakness to three main reasons, diversity of doctors school and their teaching methods 39%, clinical part defect 22% and theoretical part defect 14.6%. the current study is in agreement with other researcher conducted in Sanaa university showed department of Internal Medicine got good and very good performance respectively by most of students 61.2% and 15%, while got weak to very weak performance by only 17.4% to 6.4% of responses respectively.[25]

- Also the current study that, two third (66.4%) of the participants assessed the performance of surgical department as good to very-good, while the remaining one third 33.6% of the participants assessed the performance of surgical department as weak to very-weak. Among those who assessed the performance of this department as weak to very-weak, almost of them returned the weakness to three main reasons, diversity of doctors school and their teaching methods 37.1%, clinical part defect 32.3% and overcrowding of students from other colleges with few patient 14.5%. This result is not in agreement with other researcher conducted in Sanaa university which results showed that about 46.8% and 7.6% of students assessed good to very good performance of surgical department , while the remaining more than third 36.4% of responses evaluated weak performance and 6.7% of response very weak. [25]

For department of **Obstetrics and Gynecology** the current study showed that, only 62% of the participants assessed the performance of obstetrics and gynecology department as good to very-good, while the remaining 38% of the participants assessed the performance of obstetrics and gynecology department as weak to very-weak. Among those who assessed the performance of this department as weak to very-weak, almost of them returned the weakness to three main reasons, clinical part defect 45.6%, diversity of doctor's school and their teaching methods 26.5%, and Insufficient period of training 13.2%. This study is not in agreement with other researchers whom showed lower assessment than the current result. Study conducted in 2018 -2019 which was dealt the clinical skills gained before graduation among medical students at Sana'a university 2018-2019 batch(30) the result was 57.2% see the role of department of obstetrics and gynecology poor.[25]

For Department of **Pediatric** the current study showed that, two third (67.2%) of the participants assessed the performance of Pediatric department as good to very-good,

while the remaining one third 32.8% of the participants assessed the performance of Pediatric department as weak to very-weak. Among those who assessed the performance of this department as weak to very-weak, almost of them returned the weakness to three main reasons, diversity of doctors school and their teaching methods 30.5% clinical part defect 30.5% and Insufficient period of training 22%. The current study is not in agreement with other researchers whom showed lower assessment than the current result. study conducted in 2018 -2019 which was dealt the clinical skills gained before graduation among medical students at Sana'a university 2018-2019 batch(30).the result was 76.9 see the role of department of pediatric was poor.[25]

Performance of procedural and emergency skills:

According to student's self-assessment of procedural and emergency skills that have learned during training years,

- The result of the current study showed that, majority of students 82%, 75% and 77.6% mentioned that they can do with confidence, I.M and I.V injection, S.C and intradermal injection and cannula insertion and fluid infusion respectively. This result in agreement with other researchers findings who showed nearly the same results, study was conducted in Finland 2006, and the results showed that over 50% of the students had performed IV cannulation. [16]

  Another research was conducted in Kuwait 2005, and the results showed that 71.4% of students are confident in performing insertion of IV line. [19]

  In other side the current study is not in agreement with other researchers whom showed lower results than the current result, study was conducted in Sana'a University 2020, and the results showed that the students can do with confidence I.M and I.V injection, S.C and intradermal injection and cannula insertion and fluid infusion in 72.5%, 50.5% and 59% respectively. [26]

- Regarding to the ability to perform with confidence (blood transfusion, nasogastric tube insertion and Foley catheter insertion) were unsatisfied only (32.2%, 26% and 23.8 % respectively) This result is not in agreement with other researchers whom showed better results than the current result, study was conducted in Kuwait 2005, and the results showed that 69.2% and 63.7% of students can confidently perform Foley's catheter insertion and NGT insertion respectively. [19] another study was conducted in Syria 2012, and the results showed high confidence level by students in performing NGT insertion 87.8% and Foley's catheter insertion 85.2%.[3]

The result of the current study showed that, more than half of students can do confidently both (administration of oxygen therapy and bag & mask ventilation) (60.8% and 51.9% respectively). This result in agreement with other researchers findings who showed nearly the same results, study was conducted in Finland 2006, and the result showed over 50% of the students had performed ventilation by mask.

This study concluded that, the students' experience of emergency procedure has slightly improved. Early practicing in a clinical skills center seems to increase the student satisfaction with emergency skills education. [16]

In other side the current study is not in agreement with other researchers whom showed lower results than the current result, study was conducted in Sana'a university 2020-2021,and the result showed that Of all participant, only 22.6% and 19.6% can do with confidence administration of oxygen therapy and Bag and mask ventilation respectively.

Study was conducted in Kuwait 2005, and the results showed that, athird of the students felt confident in performing artificial ventilation and endotracheal intubation.

This study concluded that, substantial proportions of trainees lacked confidence in performing emergency resuscitative. [19]

Also, study was conducted in Syria **(**Damascus University) 2012, the result showed low confidence level was reported in emergency skills.

Study concluded that, confirm the need for effective clinical laboratory training, student participation in emergency room shifts, and the students to be allowed to take some degree of responsibility. [3]

Another study was conducted in Sana'a university 2018-2019, and the results showed that, more than half are not ready to start as doctors in the future and that the greatest deficiencies of the graduate students are in the performance of procedural and emergency skills . [25]

The result of the current study showed that, more than half of students can do confidently both (ABCD evaluation and management and estimation of degree of consciousness) 54.9% and 58.5% respectively. While only 34.4% of students can do cardiopulmonary resuscitation.

In other side the current study is not in agreement with other researchers whom showed lower results than the current result, study was conducted in Sana'a university 2020-2021, and the result showed that among all responders, only 14.4%, 16.2% and 21.4% reported they can do with confidence the Cardiopulmonary resuscitation, ABCD evaluation and management and Estimation of degree of consciousness respectively.

Also, Study was conducted in Iran, 2009, the result showed that, in spite of the fact the students found such procedures cardiopulmonary resuscitation, they told they had not been well prepared to do them.

Procedural skills that at least 50% of the respondents performed less than 2 times including cardiopulmonary cerebral resuscitation. [20]

Another study was conducted in Syria 2012, and the results reported low confidence level in emergency skills and the percentage of students who can do estimation degree of consciousness (GCS) was 14.8% and cardiopulmonary resuscitation was 2.6%.[3]

- This study showed low ability to perform all the following skills confidently (wound care and suturing, abscess drainage, ascites fluid aspiration and lumbar puncture) 26.8%, 24.2% , 14.8 % and 7.75 respectively. This result is not in agreement with other researchers whom show better results than the current result, study was conducted in USA 2003-2005, and the results showed that 12% of the students feeling competency in doing LP. [15] another study was conducted in Kuwait 2005, and the results showed that 25.3% of students were confident in performing LP. [19]

  In other side the current study is not in agreement with other researchers whom showed lower results than the current result, study was conducted in China 2008, and the results reported low confidence level on LP doing 2.3%.[17] another study was conducted in Sana'a University 2020, and the result showed that nobody said can do LP. [26]

- This study also showed low ability for dealing with case of (acute abdomen, trauma and **case of shock**) 45.3%, 28.4% and 31.1% respectively. This result is not in agreement with other researchers whom showed lower results than the current result, study was conducted in Sana'a University 2020, and the results showed 8.6% of students dealing with acute abdomen and 3.4% of them dealing with case of trauma. [26]
- The current study showed that only half of students who can do with confidence diagnosis of (flail chest, pneumothorax and plural effusion) 45.4%, 59% and 57.8%, respectively.

Overall performing of procedural and emergency skills:

Based on overall assessment of students for their procedural and emergency skills that have learned during the training years the result of this study found that, among the 21 procedural and emergency skills, near half of final-years medical students 46.5% have the ability with confidence to do procedural and emergency skills.

This result is not in agreement with other researchers whom showed lower results than the current result, study was conducted in Syria 2012 in final year medical student and the result reported low confidence level in emergency skills including GCS estimation, CPR. [3]

Another research was conducted in Sana'a university 2020, and regarding to overall assessment of students for their procedural and emergency skills that have learned during the tears of training, the result showed that only near fifth of final year medical students have the ability with confidence to do procedural and emergency skills. [26]

Overall Performance of clinical and Para clinical skills

The overall performance regarding 12 skills of clinical and preclinical skills the study showed, majority of students 81.3% evaluated their selves with good to very good ability to conduct clinical and preclinical skills. This result in agreement with other researchers findings who showed nearly the same results. In Kuwait study conducted in 2011, Most students reported high confidence level (>75%)in performing 7 of the 13 history taking / physical examination skills, and 2 of the 39 diagnostic/ treatment procedure skills. The highest confidence level was in performing abdominal examination (78.5%)[22]

Performance of children and childbirth Skills:

Regarding to the ability of the participants to perform of children and childbirth skills the result of the current study showed that, majority of participants reported that have good ability to conduct all the following skills (estimation the degree of respiratory distress, estimation the degree of dehydration, management of child dehydration and child body measurements. This result in agreement with other researchers findings In Sana'a University study conducted in 2018-2019, and the results showed that good ability to estimate degree of respiratory distress (47.4%)

,ability to estimate the degree of dehydration (51.4%), ability to perform growth chart interpretation (37.6%) & and child body measurements (42.2%) . [25]

The current study showed that only half of the participated students mentioned that they have good ability to perform the following skills (neonatal examination skill, growth chart interpretation and vaccine administration skill). the current study is not in agreement with other researchers whom showed better results than the current result. In Sana'a University study conducted in 2018-2019, and the results showed that good vaccine administration (44.5%) . [25]

Also the current study showed that only third of participants mentioned that they have good ability to perform neonatal resuscitation. the current study is not in agreement with other researchers whom showed better results than the current result, In Sana'a University study conducted in 2018-2019, and the results showed that, ability to perform neonatal resuscitation (46.2%) [25]

Performance of medical skills in Obstetrics and Gynecology

Regarding to obstetrics and gynecology skills, this study showed that majority of students (83.5%) have good ability to conduct pregnant women examination skill. In the other side the result of this study showed weakness in the ability of the students to perform skills of (normal delivery virginally, use instrument that aid deliver, episiotomy doing, IUD insertion and removal and sub-dermal contraceptive implantation). This result in disagreement with other researchers findings who showed nearly the same results. in Kuwait study conducted in 2005 and the results showed that while approximately three quarters of respondents reported confidence in performing skills such as repair episiotomy 85.6 % and conducting normal deliveries 70.4 %[22] also the current study is disagreement with other researchers conducted in 2020 in sanaa university shows that the ability to deliver normal women vaginally with 7.3 % good and 7.6% very good , ability to use instruments that aid delivery with 4% good and 6.7 very good .episiotomy doing with 2.8 % good and 6.7% very good and subdermal contraceptive implantation with 7% good and 7.6 % very good.[26]

Conclusion:

- Almost of participants were satisfied on the gained medical (skills, experience and knowledge)
- Most of students have readiness to start working as a doctor after graduate, among those who haven't readiness to start working as a doctor after graduate the main reasons were fear of making mistakes and taking responsibility, low necessary experience and skills.
- Almost of the respondents agreed in the importance of internship period to complete learning skills and experience that lack in study collage
- Regarding to the view of students on the performance of the medical departments, the best performance was of the internal medicine department followed by department of Pediatric and lowest performance was of Obstetrics and Gynecology. The participants returned the weakness to the following main reasons, diversity of doctor's school and their teaching methods, clinical part defect, theoretical part defect, overcrowding of students from other colleges with few patients and Insufficient period of training
- Regarding to procedural and emergency skills, less than half of final-years medical students have the ability with confidence to do procedural and emergency skills
- The overall performance regarding skills of clinical and preclinical skills the study showed, majority of students evaluated their selves with good to very good ability to conduct clinical and preclinical skills.
- low ability to perform skills related to Pediatric such as neonatal resuscitation and some skills related to Obstetrics and Gynecology such as normal delivery virginally, use instrument that aid deliver, episiotomy doing, IUD insertion and removal and sub-dermal contraceptive implantation .

Recommendations :

- Attention and focus on procedural and emergency skills related to emergency surgery and neonatology by including them in practical training programs and obligating students to learn them.
- Providing dolls and models for training on all emergency skills, especially those needed by the doctor in the obstetrics and gynecology department.
- Conduct studies by college of medicine upon graduation about the opinion of the student who is primarily responsible in the educational process about the skills and knowledge that the student acquired before graduation.
- Taking care of hospital doctors and providing their needs especially the financial aspect to do their duty to the fullest.
- Reconsidering , evaluating, developing and unifying the curricula, in addition to making sure to standardized the training methods of hospital doctors, if possible.
- Assigning the student some responsibilities as part of training.
- Developing methods of training and rehabilitation in proportion to achieve the goals set by the college in graduating qualified and well-trained health cadres capable of facing challenges and being able to take responsibility for health problem in Yemeni society**.**

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Appendix 1

QUESTIONNAIRE

1- Name: (optional)
_____

2- Age:
_____

3- Educational level:
_____

4- Gender:
_____

5- Marital status:
_____

6- Satisfaction of gained medical skills:
   1. Totally agree
   2. Agree
   3. Disagree
   4. Strongly disagree

7- Satisfaction of gained medical experience:
   1. Totally agree
   2. Agree
   3. Disagree
   4. Strongly disagree

8- Satisfaction of gained medical knowledge:
   1. Totally agree
   2. Agree
   3. Disagree
   4. Strongly disagree

9- Readiness to start working as a doctor in the community:
   1. Totally agree
   2. Agree
   3. Disagree
   4. Strongly disagree

10- Reasons that make graduate not ready to start working as a doctor:

1. I do not have the necessary experience and skills
2. Fear of making mistakes and taking responsibility
3. Weak in making the decision to diagnose the condition and start treating it
4. Subjective personal reasons
5. Others

11- The internship period is important to learn skills and experience that lack:
    1. Totally agree
    2. Agree
    3. Disagree
    4. Strongly disagree
12- Performance of the internal medicine department in education and providing skills and experiences to qualify graduates to work as a doctor r (if your answer was very good or good, move to the question number **"14"**):
    1. Very good
    2. Good
    3. Weak
    4. Very weak

13- Reasons that you suspected was negatively affect the acquisition of the skills and experience in internal medicine department:
    1. Insufficient period of training
    2. There are no standardized clinical skills books
    3. Diversity of doctors school and their teaching methods
    4. Theoretical part defect
    5. Clinical part defect
    6. Overcrowding of students from other colleges with few patient

14- Performance of the surgical department in education and providing skills and experiences to qualify graduates to work as a doctor (if your answer was very good or good, move to the question number "**16**"):
    1. Very good
    2. Good
    3. Weak
    4. Very weak

15- Reasons that you suspected was negatively affect the acquisition of the skills and experience surgical department:

1. Insufficient period of training
2. There are no standardized clinical skills books
3. Diversity of doctors school and their teaching methods
4. Theoretical part defect
5. Clinical part defect
6. Overcrowding of students from other colleges with few patient

16- Performance of the obstetric and gynecological department in education and providing skills and experiences to qualify graduates to work as a doctor (if your answer was very good or good, move to the question number "**18**"):

- Very good
- Good
- Weak
- Very weak

17- Reasons that you suspected was negatively affect the acquisition of the skills and experience obstetric and gynecological departments:

1. Insufficient period of training
2. There are no standardized clinical skills books
3. Diversity of doctors school and their teaching methods
4. Theoretical part defect
5. Clinical part defect
6. Overcrowding of students from other colleges with few patient

18- Performance of the pediatric department in education and providing skills and experiences to qualify graduates to work as a doctor (if your answer was very good or good, move to the question number "**20**"):

1. Very good
2. Good
3. Weak
4. Very weak

19- Reasons that you suspected was negatively affect the acquisition of the skills and experience pediatric departments:

1. Insufficient period of training
2. There are no standardized clinical skills books
3. Diversity of doctors school and their teaching methods
4. Theoretical part defect
5. Clinical part defect
6. Overcrowding of students from other colleges with few patient

Procedural and emergency skills

20- I.M and I.V injection:
1. I can do the skill with confidence
2. I participated in performing the skill but I can't do it alone
3. I watched the skill perform and I can't do it on my own
4. I haven't seen the skill perform and can't do it

21- S.C and intradermal injection:
1. I can do the skill with confidence
2. I participated in performing the skill but I can't do it alone
3. I watched the skill perform and I can't do it on my own
4. I haven't seen the skill perform and can't do it

22- Cannula insertion and fluid infusion:
1. I can do the skill with confidence
2. I participated in performing the skill but I can't do it alone
3. I watched the skill perform and I can't do it on my own
4. I haven't seen the skill perform and can't do it

23- Blood transfusion and monitoring:
1. I can do the skill with confidence
2. I participated in performing the skill but I can't do it alone
3. I watched the skill perform and I can't do it on my own
4. I haven't seen the skill perform and can't do it

24- Nasogastric tube insertion:
1. I can do the skill with confidence
2. I participated in performing the skill but I can't do it alone
3. I watched the skill perform and I can't do it on my own
4. I haven't seen the skill perform and can't do it

25- Foley catheter insertion:
1. I can do the skill with confidence
2. I participated in performing the skill but I can't do it alone

3. I watched the skill perform and I can't do it on my own
4. I haven't seen the skill perform and can't do it

26- Administration of oxygen therapy:
1. I can do the skill with confidence
2. I participated in performing the skill but I can't do it alone
3. I watched the skill perform and I can't do it on my own
4. I haven't seen the skill perform and can't do it

27- Bag and mask ventilation:
1. I can do the skill with confidence
2. I participated in performing the skill but I can't do it alone
3. I watched the skill perform and I can't do it on my own
4. I haven't seen the skill perform and can't do it

28- Cardiopulmonary resuscitation:
1. I can do the skill with confidence
2. I participated in performing the skill but I can't do it alone
3. I watched the skill perform and I can't do it on my own
4. I haven't seen the skill perform and can't do it

29- ABCD evaluation and management:
1. I can do the skill with confidence
2. I participated in performing the skill but I can't do it alone
3. I watched the skill perform and I can't do it on my own
4. I haven't seen the skill perform and can't do it

30- Estimation of degree of consciousness (GCS):
1. I can do the skill with confidence
2. I participated in performing the skill but I can't do it alone
3. I watched the skill perform and I can't do it on my own
4. I haven't seen the skill perform and can't do it

31- Wound care and suturing:
1. I can do the skill with confidence
2. I participated in performing the skill but I can't do it alone
3. I watched the skill perform and I can't do it on my own
4. I haven't seen the skill perform and can't do it

32- Abscess drainage:
1. I can do the skill with confidence
2. I participated in performing the skill but I can't do it alone
3. I watched the skill perform and I can't do it on my own

4. I haven't seen the skill perform and can't do it

33- Ascites fluid aspiration:
1. I can do the skill with confidence
2. I participated in performing the skill but I can't do it alone
3. I watched the skill perform and I can't do it on my own
4. I haven't seen the skill perform and can't do it

34- Lumbar puncture:
1. I can do the skill with confidence
2. I participated in performing the skill but I can't do it alone
3. I watched the skill perform and I can't do it on my own
4. I haven't seen the skill perform and can't do it

35- Dealing with case of acute abdomen:
1. I can do the skill with confidence
2. I participated in performing the skill but I can't do it alone
3. I watched the skill perform and I can't do it on my own
4. I haven't seen the skill perform and can't do it

36- Dealing with case of trauma:
1. I can do the skill with confidence
2. I participated in performing the skill but I can't do it alone
3. I watched the skill perform and I can't do it on my own
4. I haven't seen the skill perform and can't do it

37- Dealing with case of shock:
1. I can do the skill with confidence
2. I participated in performing the skill but I can't do it alone
3. I watched the skill perform and I can't do it on my own
4. I haven't seen the skill perform and can't do it

38- Diagnosis of flail chest:
1. I can do the skill with confidence
2. I participated in performing the skill but I can't do it alone
3. I watched the skill perform and I can't do it on my own
4. I haven't seen the skill perform and can't do it

39- Diagnosis of pneumothorax:
1. I can do the skill with confidence
2. I participated in performing the skill but I can't do it alone
3. I watched the skill perform and I can't do it on my own
4. I haven't seen the skill perform and can't do it

40- Diagnosis of pleural effusion:

1. I can do the skill with confidence
2. I participated in performing the skill but I can't do it alone
3. I watched the skill perform and I can't do it on my own
4. I haven't seen the skill perform and can't do it

Overall Performance of Clinical and para-clinical skills

Dear students please select (✔)for the correct option

Table-1

	Medical skills	Medical skills	Very good 1.Very good	Good 2.Good	Poor 3.Poor	Very poor 4.Very poor	Cannot perform the skill 5.Cannot perform the skill
31	41	Taking the medical history					
32	42	General examination					
33	43	Chest examination					
34	44	Cardiac examination					
35	45	Abdominal Examination					
36	46	CNS examination					
37	47	Surgical cases examination					
38	48	Chest and abdominal x-ray interpretation					
39	49	ECG interpretation					
40	50	Brain CT scan interpretation					
41	51	understanding lab investigation reports					
42	52	writing prescription of drugs					

Medical skills in pediatric:

	Medical skills	1.Very good	2.Good	3.Poor	4.Very poor	5.Cannot perform the skill
53	Neonatal examination					
54	Estimation of degree of respiratory distress					
55	Estimation of degree of dehydration					
56	Child body measurements					
57	Growth chart interpretation					
58	Neonatal ressussitation					
59	Management of child dehydration					
60	Vaccine administration					

Table-2

Medical skills in obstetrics, gynecology

Table-3

	Medical skills	1.Very good	2.Good	3.Poor	4.Very poor	5.Cannot perform the skill
61	Pregnant women examination					
62	Ability to deliver normal women vaginally					
63	Ability to use instrument that aid delivery					
64	Episiotomy doing					
65	IUD insertion and removal					
66	Subdermal contraceptive implantation					

67- Reasons that negatively affect the acquisition of the skills and experience necessary to qualify you as a doctor select the correct option even more than one if found:

1. Delayed payment of financial dues of doctors in the hospital.
2. Student neglect and absenteeism
3. There are no standardized clinical skills books
4. Diversity of coaches and their teaching method
5. Insufficient period of training
6. Others ——————————

Thanks for cooperating with us,,,,

الملخص العربي للبحث:

المقدمة

المهارة السريرية هي أي عمل منفصل يمكن ملاحظته ضمن العملية الشاملة لرعاية المرضى. يتضمن كل تلك المهارات المطلوبة أثناء التعامل بين المريض والطبيب بالإضافة إلى مهارات الاتصال المطلوبة أثناء التفاعل مع المهنيين الصحيين الآخرين كجزء من رعاية المرضى. فترة التخرج هي أصعب فترة لطلاب الطب لأنها ما بين الماضي الذي انتهى حيث يفترض أنهم اكتسبوا مهارات إكلينيكية وخبرات ومعرفة علمية تؤهلهم ليصبحوا أطباء أكفاء وراغبون وقادرون على تحمل المسؤولية لبداية العمل في المجتمع كأطباء مستقلين . هدفت هذه الدراسة إلى معرفة وجهات النظر حول المهارات السريرية التي اكتسبوها قبل التخرج وقدرتهم المختلفة لطلاب الطب في الجامعة الإماراتية الدولية واستعدادهم لبدء العمل كطبيب.

المنهجية

تم إجراء دراسة مقطعية على طلاب وطالبات السنة الخامسة، الخريجين وأطباء الإمتياز في كلية الطب البشري في الجامعة الإماراتية الدولية. تم جمع البيانات من خلال استبيان ورقي ذاتي يحتوي على 67 فقرة وزعت على 183 طالب وطالبة. يتكون الاستبيان من 5 أجزاء ، البيانات الشخصية ، المسح العام ، التقييم الذاتي للمهارات الإجرائية والطوارئ ، التقييم الذاتي للمهارات السريرية الأساسية ، المهارات المتعلقة بأمراض النساء والتوليد ، والمهارات المتعلقة بطب الأطفال. تم تحليل البيانات بواسطة برنامج الحزمة الإحصائية للعلوم الاجتماعية.

النتائج

فيما يتعلق بالمعرفة الطبية المكتسبة ، كان ما يقرب من 86.8٪ من الطلاب راضين تمامًا عن مقدار وجودة المعرفة الطبية المكتسبة ، بينما كان 13.2٪ فقط غير راضين. ووجدت الدراسة أن معظم الطلاب لديهم استعداد لبدء العمل كطبيب بعد التخرج ، حيث أفاد 51.6٪ بأنهم موافقون و 20.9٪ موافقون تمامًا ، في حين أن ربع الطلاب غير مستعدين للعمل ، حيث أفاد 24.7٪ بعدم الموافقة بينما أفاد 2.7٪ بـ لا أوافق بشدة. بخصوص المسؤول الأول عن ضعف مهارات وخبرات الخريجين. أشار طلبة كلية الطب إلى أن 44.3٪ سببه هو تأخر سداد المستحقات المالية للأطباء بالمستشفى و 37.2٪ لتنوع المدربين وطريقة تدريسهم و 30.1٪ لإهمال وتغيب الطلاب. بينما 27.3٪ حمّلوا المسئولية عدم كفاية فترة التدريب و 25.1٪ عدم توفر كتب المهارات السريرية الموحدة.

استنادًا إلى التقييم الشامل للطلاب لمهاراتهم الإجرائية وحالات الطوارئ التي تعلموها خلال سنوات التدريب ، فإن ما يقرب من نصف طلاب الطب في السنوات الأخيرة 46.5٪ لديهم القدرة بثقة على القيام بالمهارات الإجرائية والطارئة. الأداء العام فيما يتعلق بالمهارات السريرية والغير سريرية التي أظهرت الدراسة ، أن غالبية الطلاب 81.3٪ قيموا ذواتهم بقدرة جيدة إلى جيدة جدًا لإجراء المهارات السريرية والمهارات الغير سريرية. أظهرت الدراسة ضعف القدرة على أداء المهارات المتعلقة بالأطفال مثل إنعاش حديثي الولادة وبعض المهارات المتعلقة بأمراض النساء والتوليد مثل الولادة الطبيعية ، واستخدام الأدوات التي تساعد على الولادة ، وإجراء بضع الفرج ، وإدخال اللولب وإزالته وزرع موانع الحمل تحت الجلد

الاستنتاج

توصلت هذه الدراسة إلى الرضا الكبير عن مقدار ونوعية المعرفة الطبية المكتسبة والاستعداد الجيد لدى الطلاب لبدء العمل كطبيب بعد التخرج. كما توصلت هذه الدراسة إلى قدرة جيدة على أداء بعض المهارات وضعف القدرة على أداء الأخرى ، وكان من أسباب الضعف تأخر سداد المستحقات المالية للأطباء في المستشفى وتنوع المدربين وطريقة تدريسهم وإهمال الطلاب وتغيبهم عن العمل.

الجمهورية اليمنية
وزارة التعليم العالي والبحث العلمي
الجامعة الإماراتية
كلية الطب والعلوم الصحية
قسم طب المجتمع

آراء طلاب المستويات الأخيرة في قسم الطب البشري – الجامعة الإماراتية الدولية حول المهارات السريرية المكتسبة قبل التخرج 2022

تم تقديم هذا البحث لإستكمال متطلبات الحصول على درجة البكالوريوس في الطب والجراحة

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