Journal for Re Attach Therapy and Developmental Diversities
eISSN: 2589-7799
2022 December; 5 (2): 162-170

An Investigation Of Outpatient Training Process Of General Medicine Course At The Imam Reza Educational And Treatment Center

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Abstract

Background: The transition from the traditional to the innovative method in medical education is currently underway, and outpatient education and training are receiving greater attention. This study was conducted to examine the state of learners' education in the clinic so that after identifying the existing flaws and obstacles, it will open the door to making the proper decisions to address the issues.
Methods: Using a questionnaire, the opinions of professionals regarding the barriers to outpatient education and the opinions of students based on the quality of outpatient education were gathered. The validity and reliability of the questionnaire have been established through expert consultation and test-retesting, respectively. Additionally, clinic visit statistics were examined.
Results: Professors chose the good and average choices for evaluating skills. In terms of clinical training environment facilities and educational opportunities, the majority chose the very poor choice. In terms of clinical training methods, they selected the average choice, and in terms of educational planning, they selected the good choice. The majority of learners chose poor and very poor choices in the questionnaire for scientific resources, clinic conditions.
Conclusion: In this study, the shortcomings of outpatient training included a lack of clinical education facilities, a lack of training in prescribing and clinic management, the inability to independently prescribe medication and treatment, a large number of patients, the absence of structured discussions, and a lack of training time.

Keywords: Outpatient Education and Training, Clinical Education, Therapeutic (Treatment) Educational Center

Introduction

Everyone is aware of the significant role that general practitioners play as active members of the health team in dealing with and treating outpatients. The results of studies and experiences conducted in the country's health care system in medical education programs indicate that the contribution of outpatient training is emphasized as a serious issue and that 50% of the activities related to internships and clinical internships are devoted to this issue.[1]
Medical students and residents, who are primarily educated with hospitalized patients, do not receive adequate exposure to outpatients.[2] In accordance with applicable legislation and ministry permissions, more than fifty percent of medical student training should take place in clinical settings. Based on the basic standards of the general medical education course in the area of educational and research resources, all medical schools are required to provide the necessary resources for general medical students to receive basic and clinical training in the community, outpatient settings, and inpatient settings in accordance with the general medicine course's educational program. These resources should have the quantity, variety, combination of illness patterns, age and gender, physical facilities, and accessibility to meet the needs of vulnerable populations and patients. With the evolution of the general medical program, policymakers in the field of general medical education should shift hospital clinical education from inpatient to outpatient (health and treatment facilities in the community) and home visits.[3]
The World Federation for Medical Education (WFME) has developed international principles and standards for general medical education, and they predict that outpatient education will continue to grow in institutions around the world. Establishing the current state of outpatient education is crucial for developing effective interventions in this area. According to the program's vision plan, by 2025, the general medical education program will have produced competent

and professional doctors with strong Islamic values and a keen sense of responsibility for the preservation and improvement of public health in all its forms. With this in mind, one of the goals of the educational system is to shift the focus of clinical training in hospitals from inpatient care to outpatient care.

The particular characteristics of medical education in the outpatient department have produced situations that traditional methods of teaching cannot match, despite the numerous improvements made to them.[4] According to a survey of general practitioners, over half have a negative view of medical education. Approximately 80% of general practitioners did not believe that university hospitals alone were sufficient for student instruction, and they suggested additional locations, such as special clinics of health centers and non-teaching government hospitals.[5] In a separate survey of general practitioners, 61% had a positive attitude and the remainder had a negative opinion toward outpatient medical education during the general period. Meanwhile, 63% stated that it is more feasible to follow up with patients in healthcare facilities than academic centers.[6] As a result of a study conducted in 1996 at the Isfahan University of Medical Sciences, 545.5% of trainees and 37.9% of interns selected the choice about the learner's involvement in clinical activity.[7]

Students in the major departments are unsatisfied with the lack of attention devoted to educational rounds, outpatient clinics, and theory classes, according to a study conducted by Zamanzad et al. in Shahrekord. Morning reports, on the other hand, are correlated with great satisfaction. The degree of satisfaction in the internal and pediatric departments was related to the morning report, the outpatient clinic visit in the surgery department, and the department's theory classes in the following degree. Students in the women's department reported the lowest degree of satisfaction with the outpatient clinic and theory classes.[8]

Mortazavi et al. conducted a study at the Isfahan University of Medical Sciences, and their findings indicate that patients are most satisfied with outpatient education in the community (health centers) when it comes to performance, teaching methods, and the number, and variety of patients, and are least satisfied when it comes to the quality of medical equipment and comfort facilities available at these facilities. The data collected from community-based outpatient centers allows for a greater emphasis on and sharing of clinical training in educational planning.[9]

According to a study conducted by Avizhgan et al. in Isfahan and titled "The quality of outpatient education from the perspective of interns and trainees," improvements are required across six areas to enhance the quality of outpatient education. There needs to be more focus on problems associated with the standard of teaching delivered to residents. Respected academics, likewise, must be vigilant in their efforts to better this area by, for example, keeping regular clinic hours and devoting more time to teaching. Second, each clinic's infrastructure and physical space should be evaluated, and any necessary adjustments should be implemented.[10]

The majority of students (3.188) had a poor impression of the current level of clinical education in the study by Khorasani et al. in Mazandaran in 2005, titled "Reviewing the quality of clinical education from the point of view of professors and students." However, the majority of professors (1667) stated that the existing quality was appropriate. The most significant drawbacks to this perspective are the potential for low autonomous activity, the absence of active supervision by professors, the absence of training in prescription writing and differential diagnosis, and the poor physical environment.[11]

According to the results of another study conducted in Isfahan by Molabashi et al., the average length of time spent interacting by the professor with the patient was less than 5 minutes, whereas the average length of time spent interacting by the professor with the student was less than 5 minutes in fewer than half of the cases. The short length of time spent in both patient and teacher-student interactions suggests investigating the causes and solutions for this problem.[12]

The research done in the United States and Ireland reveals that outpatient care is not only more cost-efficient than hospitalization but also more effective and leads to greater customer satisfaction. A 1995 US study found that student rotations in outpatient medicine departments improved students' hospital management skills.[13] Dr. Rebecca et al.'s research into primary care education drew some interesting conclusions, such as that training in clinics is superior to training in private offices and that training in rural locations is more satisfying than training in metropolitan areas.[14] Dr. Adina Kalet et al. conducted a study comparing education in outpatient settings with that in inpatient settings, finding that outpatient settings fostered a greater sense of responsibility towards patients, improved communication between students and patients, and fostered stronger bonds between students and faculty.[15]

Consequently, outpatient training provides both the learner and the patient with distinct benefits. so that the learner's experience increases in the following circumstances: a wide range of manifestations, a large number of patients, indistinguishable manifestations of chronic diseases and their continued treatment, the ability to generalize the training, adequate and correct epidemiology care and health education and psychosocial aspects, increased communication between the recipient of education and the recipient of services, and a lack of dependence on the educator. It also provides benefits for the patient, such as fostering a sense of altruism, enhancing his knowledge of his illness, and boosting the frequency and duration of his doctor appointments.[16]

Recent decades have seen an increase in the importance of clinical education as a component of clinical training, and outpatient training plays a vital role in preparing students to manage typical situations referred to clinics. A clinic is a place where diseases can be diagnosed, treated, and prevented without having to be hospitalized.[17]

Due to the significance and position of this medical training center, determining the status of outpatient training for students in this center and identifying the center's strengths and weaknesses can pave the way for the future planning of

general medical education. Therefore, the purpose of this article was to examine the process of outpatient training at the Imam Reza Center using the CIPP model (context, input, process, and product) and relying on the evaluation process.

Methods

The current study was a cross-sectional descriptive study, and the statistical population contained the accessible documentation from 2014, as well as statistics and figures from Imam Reza Educational and Medical Center clinics. A total of 50 individuals were chosen at random from among 100 faculty members and clinical training groups at the Imam Reza Educational and Therapeutic Center for the survey. A questionnaire was used to survey clinical training, and a convenience sampling approach was used to enter participants into the study. In addition, 30 outpatient clinic cases were taken into account as well. It should be noted that availability influenced the convenience sampling approach.
The numbers of interns and externs present in the clinic were evaluated individually in this study's analysis of clinic statistics for Imam Reza Hospital in 2013, and the average presence of professors in the clinic as well as the number of patients seen were calculated.
A questionnaire was used to gather opinions from professors and learners about the effectiveness of outpatient training, and SPSS was used to analyze the results. In this study, two different kinds of researcher-made questionnaires were used, one of which is the questionnaire on obstacles to clinical education from the professors' point of view, which includes the following areas and each of which also includes several sub-areas: 1: health care personnel; 2: evaluation of clinical skills; 3: facilities for clinical training environments; 4: clinical training places; 5: clinical training methods; and 6: appropriate training planning. A second questionnaire with 20 questions is available in the appendices and is used to assess the quality of clinical instruction from the perspective of interns and externs. Additionally, 30 cases from outpatient clinics were examined to examine the case-writing process.
The data were analyzed using descriptive statistical techniques that included mean and standard deviation. The questionnaires used in this study were obtained by reviewing the literature; their validity was established through expert consultation; their reliability was established through the test-retest method; and each part of the questionnaire was assessed as an independent variable.
Faculty from clinical training groups employed by the Imam Reza Medical Education Center in Tabriz who were willing to participate in the study with informed consent met the inclusion criteria. This study included interns and trainees who were studying at the Imam Reza Medical Education Center in Tabriz.

Results

Out of the 50 questionnaires that were distributed among the professors, 35 professors filled out the corresponding questionnaire (70% return rate). Among the learners, 20 of the 50 questionnaire items were evaluable (80% return rate) (Table 1). Regarding the learners, 50% were interns and 50% were externs. Regarding the professors, 28 were specialists and 7 were sub-specialists (Figures 1, 2). First, the questionnaire on barriers to clinical education was examined from the professors' point of view, and the following results were obtained:

Medical and Health Personnel
This area is divided into four sub-areas, the outcomes of which are as follows.
a) Collaboration with students: 17 individuals (148.5) chose the average choice, (the most selected choice). 4 people (114) chose a very good choice, 9 people (31.4) chose a good choice, 5 people (14.25%) chose a poor choice, and no one chose a very poor choice.
b) In interactions with students, 18 individuals (51.4) chose the average choice (the most selected choice). 4 people (114) chose the very good choice; 8 people (228) chose the good choice; 5 people (142) chose the poor choice; and o chose the very poor choice.
c) Transparency of personnel duties, 15 people (428) chose the average choice (the most selected choice), 50 people (14.2) chose the very good choice, 10 people (285%) the good choice, 5 people (142) chose the poor choice, and no person chose the very poor choice.
d) Transparency of trainees' duties, 16 (45.7%) trainees chose the good choice (the most selected choice), the very good choice was chosen by 7 people (20), the average choice by 9 people (25.7%), the poor choice by 3 people (8.5%), and the very poor choice by nobody.
In the overall evaluation of this area, 1475 individuals chose the average choice (421). 5 people chose a very good choice; 10.75 people chose a good choice, 4.5 people chose a poor choice, and nobody chose a very poor choice.

How to Evaluate Clinical Skills
This area is divided into three sub-areas, the outcomes of which are as follows:

a) The test's capacity to evaluate skills; 15 individuals (428) chose the good choice (the most selected choice). The very good choice was selected by no individuals, the average choice by 10 people (1385), the poor choice by 90 people (257), and the very poor choice by 1 person (28).
b) Using two observers in the evaluation, 13 people (37.1%) chose the average choice (the most selected choice), 3 people (8.5%) chose the very good choice, 4 individuals (114) chose the good choice, 10 people (28.5%) chose the poor choice, and 5 people chose the very poor choice (142).
c) Announcement of educational minimums, 13 people (371) chose the good choice (the most selected choice), 3 people (8.5) chose the very good choice, 9 people (25.7%) chose the average choice, 7 people (20) chose the poor choice, and 3 people (85) chose the very poor choice.

In the overall evaluation of this area, the average number of people who chose the good and average choices was 106 (302), 2 people chose the very good choice, the poor choice was chosen by 86 people, and the very poor choice was chosen by 3.

Facilities for Clinical Training Environments

This area is divided into six sub-areas, the outcomes of which are as follows:

a) Consultation room, 15 individuals (428) chose the poor choice (the most selected choice). 10 people chose the very good choice (28), 5 people chose the good choice (142), 5 people chose the average choice (14.2), and 9 people chose the very poor choice (25.7).
b) Holding class, 14 individuals (40) chose the poor choice (the most selected choice). No one chose the very good choice; 5 people (142) chose the good choice; 6 people (171) chose the average choice; and 10 people chose the very poor choice (28,5).
c) The clinic conditions are in terms of size, location, light, ventilation, and seating. 14 people (40) chose the very poor choice (the most selected.). Nobody chose the very good choice, 3 people (85) chose the good choice; 7 people chose the average choice (20) and 11 people chose the poor choice (31.4)
d) Photo and video facilities, 18 people (51.4) chose the very poor choice (the most selected choice). Nobody chose the very good choice, 2 people (57) chose the good choice, 5 people (142) chose the average choice, and 10 people (285) chose the poor choice).
e) Regarding computers and the internet, 17 individuals (48.5) chose the very poor choice (the most selected choice). Nobody chose the very good choice, 3 people (185) chose the good choice; 4 people (1104) chose the average choice, and 11 people (3104) chose the poor choice.
f) Access to reference books; 18 participants (51.4) chose very poor choice (the most selected choice). Nobody chose a very good choice, 2 people (57) chose the good choice, 5 people (142) chose the average choice, and 10 people (285) chose the poor choice.

In the overall evaluation of this area, the total average number of people who chose the very poor choice was 14.3 (408), the very good choice was 16, the good choice was 3, the average choice was 48, and the poor choice was 12.5.

Clinical Training Facilities

This area is divided into three sub-areas, the outcomes of which are as follows:

a) Using other educational places, 17 people (48.5%) chose the very poor choice (the most selected choice). Nobody chose the very good choice, and there was no decent alternative). 2 people (5.7%) chose the good choice, 3 people (185) chose the average choice, and 13 individuals (1371) chose the poor choice.
b) Separation of the educational clinic from the treatment, 15 people (428) chose the very poor choice (the most selected choice) people chose the very good choice, 5 people (1402%), 5 people (142) chose the average choice, and 10 people (285) chose the poor choice.
c) Number of patients admitted to the clinic, 12 people (34.2%) chose the good choice (the most selected choice). 1 person (128) chose the very good choice, 10 people (285) chose the average choice, 7 people (20) chose the poor choice, and 5 people (142) chose the very poor choice.

In the overall evaluation of this area, the average number of persons who chose the very poor choice was 12.3 (35.1), 33 people chose the very good choice, and 6.3 people chose the good choice.

Clinical Training Methods

This area has 4 sub-areas, the results of which are as follows:

a) Skill repetition, 15 people (428) chose the average choice (the most selected choice). Nobody chose the very good choice, 5 people (142) chose the good choice, 9 people (25.7) chose the poor choice, and 6 people (171) chose the very poor choice.
b) Observation of different cases, 17 people (48.5) chose the average choice (the most selected choice). 2 people (5.7) chose the very good choice, 11 people (3104) chose the good choice, 3 people (185) chose the poor choice, and 2 people (5,7) chose the very poor choice.

c) Use of medical moulage and patient portraits, 18 people (5,104) chose the very poor choice (the most selected choice), nobody chose the very good choice, 2 people (57) chose the good choice, 3 people (8.5) chose the average choice and 12 people (342) chose the poor choice.
d) Appropriateness of the educational method with the type of skill, 15 people (428) chose the average choice (the most selected choice), 1 person (2.8) chose the very good choice 10 people (28.5%) chose the good choice, 8 people (228) chose the poor choice, and 1 person (28) chose the very good choice.

In the overall evaluation of this area, the average number of people who chose the average choice was 12.5 people (35.7). 75 people chose the very good choice, 7 people chose the good choice, 8 people chose the poor choice and 6.75 people chose the very poor choice.

Appropriate Educational Planning

This area has 4 sub-areas, the results of which are as follows:

a) Specifying the target groups, 17 people (48.5) chose the average choice (the most selected choice). 1 person (28) chose the very good choice, 4 people (114) chose the good choice, 10 people (28.5) chose the poor choice, and 3 people chose the very poor choice (185).
b) Educational content, 15 people (428) chose the good choice (the most selected choice) 4 people (11.4%) chose the good choice, 12 people (342) chose the average choice, 3 people (85) chose the poor choice, and 1 person (28) chose the very poor choice.
c) Number of students in each clinic, 13 people (371) chose the good choice (the most selected choice). 1 person (28) chose the good choice, 10 people (28,5) chose the average choice, 8 people (228) chose the poor choice, and 3 people (185) chose the very poor choice.
d) Visit and training time, 14 people (40) chose the good choice (the most selected choice). 6 people (17.11) chose the very good choice, 10 people (28,5) chose the average choice, 3 people (85) chose the poor choice and 2 people (5.7) chose the very poor choice (Figure 3).

In the overall evaluation of this area, the average number of people who chose the average choice was 12.25 people (35), the very good choice was 3 people, the good choice was 11.5 people, the poor choice was 6 people, and the very poor choice was 2025 people.

Discussion

As was already indicated, outpatient and clinical education have become increasingly important in recent years. This study's objective was to assess the interns' and trainees' outpatient training experiences at Imam Reza Educational and Medical Center clinics. The following can be addressed in the survey of professors, which focuses on six areas: Professors' general satisfaction in the area of healthcare workers was average. The cooperation and interaction with students, as well as the personnel's transparency of the duties, were average, and the interns' transparency of the duties was positive. The professors thought the announcement of educational minimums and the test's ability to assess were both good. However, the employment of two observers decreased their level of satisfaction to average. The professors' overall satisfaction with clinic facilities has been low, and they stated that clinic education is hampered by a lack of resources like computers and internet access as well as generally unsuitable clinic surroundings. Professors' general satisfaction with educational facilities has been quite low, so they were highly disappointed with the lack of distinction between educational and non-educational clinics and the underutilization of other educational facilities. The level of professor satisfaction in the area of clinical teaching techniques was average. The use of medical mollage and patient models, however, did not satisfy the professors. They were moderately satisfied with the observation of various instances, the repetition of skills, and the appropriateness of the educational technique for the type of skill. The general level of satisfaction among professors in the area of effective educational planning was average. The target audiences were unclear, but the professors felt that the training's substance, the number of students in each clinic, the timing of the visit, and the training itself were all appropriate.

The students' assertion that they cannot access the clinic's research resources is consistent with their professors' opinions in this area. The majority of students were frustrated by their inability to independently prescribe medications and treatments. Some of the trainees' complaints have also been that they are unable to follow up with patients in the clinic, which is, of course, a result of their regular rotation. Most students felt that there wasn't enough training provided in clinic management. Additionally, the lack of instruction in prescribing skills was one of the things that most students found disappointing. The majority of students complained that there was no organized and cogent presentation of the topics and that the professors did not oversee the procedure for gathering and treating patient histories. Besides, most students believed that the objectives of clinical training were not known in advance. The majority of the students reported that the clinic's intern and trainee numbers are adequate. A lot of patients are referred, and the variety of patients, the opportunity for independent visits by students, and the opportunity to watch the professor administer exams and treat patients have all

been average. The majority of students stated that the clinic was generally useful, and there was average interest in clinic education, the use of differential diagnoses, and the importance of having a specialized lecturer in the classroom.
The average amount of time spent on training learners per patient is lower than usual, with the neurology and gastroenterology training groups spending the most time on this task and the rheumatology and surgery training groups spending the least. This information was discovered through an analysis of the statistics of typical visits to the clinics. It was discovered that the majority of students use the SOAP approach for documentation (Figure 4).
The current study can be compared to earlier investigations based on the aforementioned conclusions. In the Zamanzad et al. study,[8] which is similar to our study in several ways, learners were dissatisfied with outpatient clinics in major departments. We looked at the quality of each detail individually in our study, but overall satisfaction was taken into account in Dr. Zamanzad's research. Additionally, in Dr. Zamanzad's study, each educational group's degree of satisfaction was assessed separately, whereas, in our study, each educational group's level of satisfaction was assessed collectively. The primary cause, according to Khorasani et al.'s study,[11] was the learners' general poor perception of clinical education. This adverse perception is linked to several factors, including the potential for low autonomous activity, a lack of active faculty supervision, a lack of training in prescription writing and differential diagnosis, and an unattractive physical atmosphere. The types of questionnaires used for professors and students in Dr. Khorasani's study were undoubtedly identical, and the outcomes from those studies were contrasted with those used in our study.
According to the study by Avizhgan et al.[10] which is in line with our study, the timely and regular presence of professors in the clinic, giving more thought to the issue of education, improving the facilities and physical space of the clinic, and paying more attention to the matter of education can all improve the quality of outpatient education. According to the study of Molabashi et al.[12] there is little interaction between instructors, students, and patients. In our study, the average training time per patient was less than ten minutes in every educational group and never exceeded ten minutes in any group.
According to the Mortazavi et al. study[9] which is consistent with our findings, the physical atmosphere and facilities play a major role in how dissatisfied students are with their outpatient education. Additionally, the number and diversity of patients were cited in Dr. Mortazavi's study as the factors that contributed most to students' satisfaction with their outpatient training. This is different from what our study found, which was that the students gave an average to low grade to the professor's performance, the clinical training methods, and these other things.
In the study by Saeideh Ghaffarifar et al.[13] the frantic and disorganized pace of patient visits was identified as the major issue in the outpatient training of interns. Even though the learners think that the number of patients seen is high and that the training time per patient is also short, the statistics we have right now suggest that the visit time per patient is also low. About half of the participants in Dawoodi's study[5] did not have a favorable opinion of outpatient education, and about 80% of them thought that university hospitals alone were insufficient for education. Nearly identical findings were found in our study, indicating that learners were dissatisfied with the clinical training environment. Of course, it should be noted that general practitioners, not students in general medicine courses, made up the study population in Dawoodi's study.
In Adina[15] study, the education in inpatient departments was contrasted with the education in outpatient programs, finding that outpatient programs had advantages. However, our study did not make this comparison and only looked at outpatient training and education.

Conclusion

From the professors' point of view, the obstacles to outpatient training include the facilities of the training environment and the places of clinical training. From the point of view of the learners, among the shortcomings of research training are the lack of clinical education facilities, the lack of training in prescription writing and clinic management, the impossibility of prescribing medicine and treatment independently, the large number of patients, and the lack of structured discussions. Also, the training time per patient is less than usual in most training clinics.
Regarding the obtained results, it is very important to improve the facilities of the educational environment of the clinics, including the physical conditions and giving access to facilities such as the Internet, reference books, and scientific resources. Moreover, it is essential to determine educational goals and minimums, present coherent and structured discussions on topics by professors, separate educational clinics from non-educational clinics, reduce the number of patients visited in educational clinics, increase the time of visits and education, and increase the variety of patients. The proposed model to solve this problem was the case model. Finally, the students emphasized the need for professors to pay more attention to the training of prescription writing and drug administration independently, and professors asked for holding workshops on prescription writing training to compensate for the lack of this training in clinics.

Funding: None.

Conflict of interest: The authors declare that they have no conflict of interest.

Ethical Approval and Consent to Participate: Ethical code: 91/3-5/17.

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Table

Table 1. Mean Scores of Clinic Visit.

Professors	Extern	Intern	Resident	Day	Patient	Average time of training per patient
Neurology (Average of 6 professors)	58	40	14	33	438	8 min
Nephrology (Average of 5 professors)	15	14	7	35	355	5 min
Endocrinology (Average of 6 professors)	0	0	12	30	411	5 min
Rheumatology (Average of 6 professors)	26	31	14	47	605	3 min
Pulmonology (Average of 6 professors)	0	0	9	14	182	5 min
Infectious (Average of 6 professors)	37	33	4	19	70	5 min
Surgery (Average of 3 professors)	0	3	5	8	61	2 min
ENT (Average of 6 professors)	0	144	39	39	1092	5 min
Gastroenterology (Average of 6 professors)	32	29	12	18	176	7 min

Figure captions

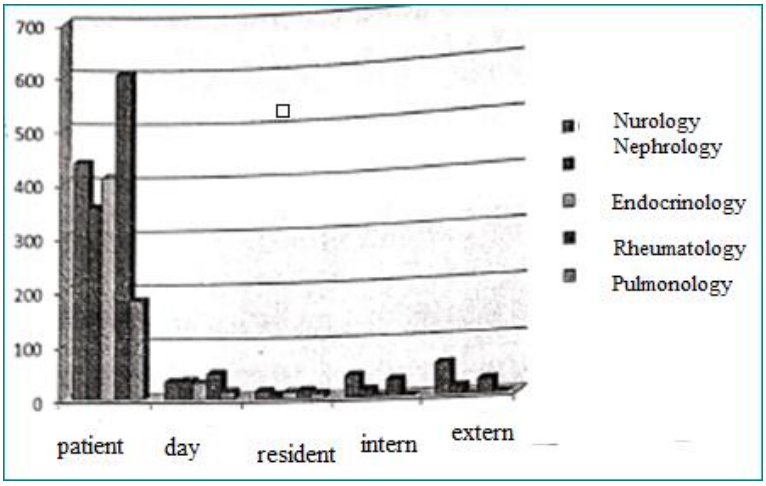

Figure 1. Mean Scores of Visits to Neurology, Nephrology, Endocrinology, Rheumatology, and Pulmonology clinics.

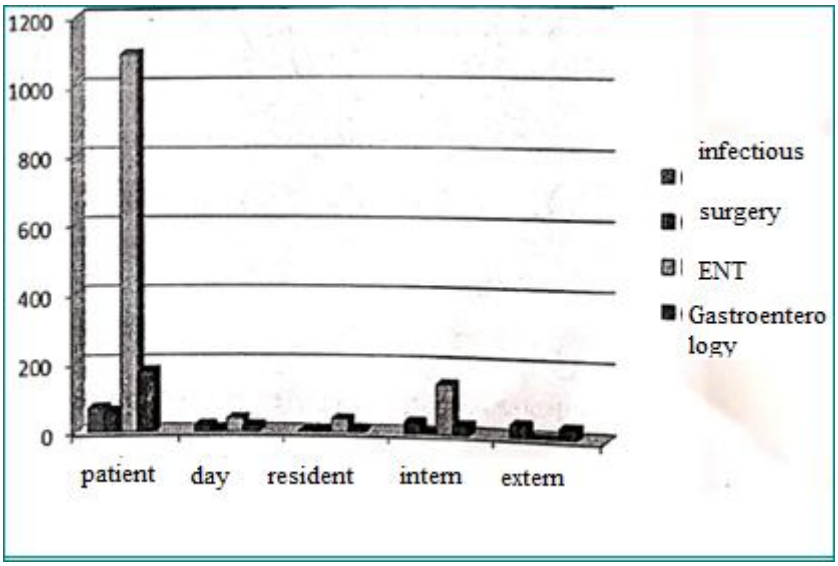

Figure 2. Mean Scores of Visits to Surgery, ENT, and Gastroenterology Clinics.

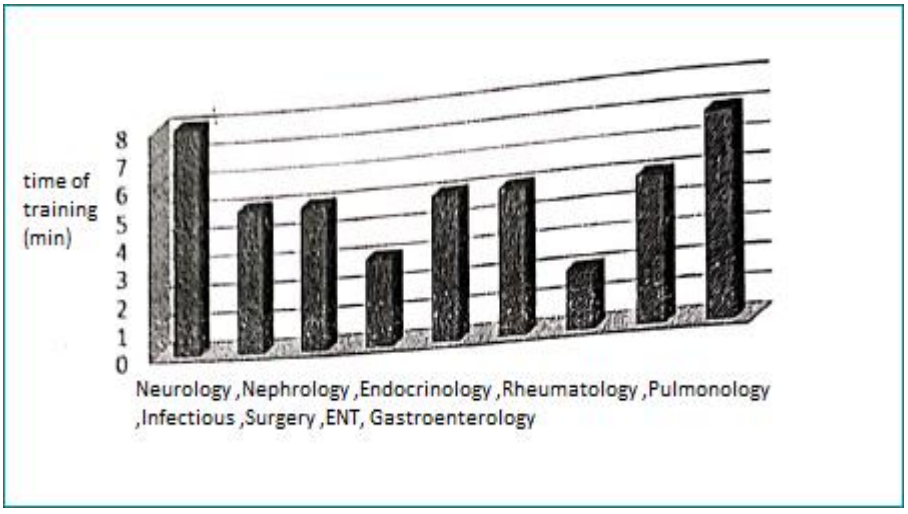

Figure 3. Mean Scores of Training per Patient by Training Group.

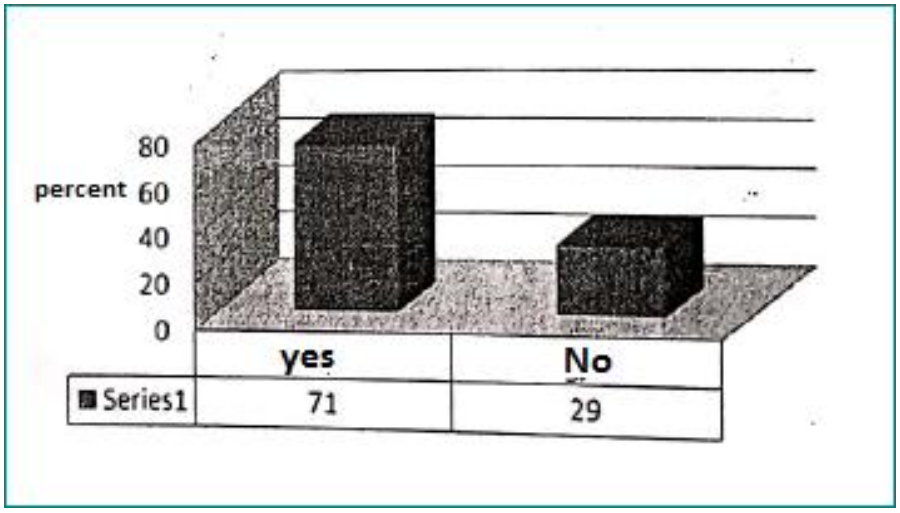

Figure 4. General Review of Documentation Compliance based on the SOAP Model.